FEEDSTUFFS

The Weekly Newspaper for the Feed Industry

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CAPITAL COMMENT

By John Cipperly
Feedstuffs Washington Correspondent

Comments on Low Broiler Prices

WASHINGTON—Recent low broiler prices are said to have provoked some strong repercussions in congressional mail from at least some of the witnesses who had urged Congress not to adopt the omnibus farm bill, particularly regarding poultry. Now some of these witnesses are asking for federal action, following the price break. (However, a number of poultry organizations have reaffirmed opposition to federal controls. Also see other stories in this issue.)

It seems improbable that Congress will act on any last minute appeal, and the possibility of a marketing order and agreement program for

(Turn to BROILER, page 93)

Tough Going for Omnibus Bill

WASHINGTON — The omnibus farm bill is still finding the going tough in Congress. The House Agriculture Committee seems about to give up on any hope of reporting the bill. The same condition exists in the Senate, where already the agriculture committee has been lifting out special provisions of the bill and reporting them individually.

Yet it seems likely that Congress will approve a one-year extension of the feed grain bill as reported last

(Turn to FARM BILL, page 93)

Reports Indicate Turkey Trade Can Recover from Low Prices

By FRED E. TUNKS
Feedstuffs Staff

Representatives of the turkey industry—including feed manufacturers, hatcheries, government and industry association officials—indicated this week that even though turkey prices are unfavorably low, the situation isn't as bad as it may seem on the surface. Still, concern is broad and deep, and in various ways the industry is emphasizing the need for production and marketing adjustments to reduce the complexities of this year's record crop.

While it is generally believed that producers sending turkeys to market now probably are getting less than cost of production out of their birds, some observers say that efficient and alert operators who are in the business to stay and are prepared for low as well as high prices will make satisfactory profits in the long run.

Several contacts made by Feedstuffs indicated that not enough at-

(Turn to TURKEYS, page 89)

• • •

Poult Hatch Remains Well Ahead of 1960

WASHINGTON—Poult production keeps rolling along at a volume about a fourth larger than last year.

The total hatch of poults of all breeds hit 21,916,000 in May, the largest total for a single month so far this year and 24% ahead of May, 1960, according to U.S. Department of Agriculture data covering commercial hatcheries. And this expansion, it

(Turn to POULTS, page 89)

'Expanding' Feed Improves Digestibility

MADISON, WIS.—A new feed processing method—called "expanding"—resulted in nearly 11% higher digestibility of corn and soybeans in feeding trials with dairy heifers, according to a report by University of Delaware researchers at the American Dairy Science Assn. meeting at the University of Wisconsin.

Donald W. Burton, reporting the work, said: "The process is somewhat similar to the system used in making 'puffed' breakfast foods. The corn and soybeans are placed in a large steam pressure cooker, creating great heat and pressure. The material is then forced out through a small aperture. This sudden reduction in air pressure causes the material to expand, rupturing the cells of the grain."

(An earlier story on this work appeared in Feedstuffs, June 17. In addition, the Delaware study is reviewed by Dr. S. H. Morrison in his research column on page 82 of this issue of Feedstuffs. Dr. Morrison notes that a good deal of interest has been shown in use of "expanded" feeds, in addition to their already wide use in pet foods. Delaware scientists have been active in this area of research. Dr. Morrison suggests that manufacturers of calf foods and other young animal feeds watch for

(Turn to EXPANDED FEED, page 89)

3% Gain in Fall Pig Crop Indicated by Intentions

WASHINGTON—If fall farrowings of pigs go where they're aimed by the June 1 breeding intentions of producers, 6,017,000 sows will farrow during the months of June through November, the June 21 pig crop report of the U.S. Department of Agriculture indicates.

That number of farrowings would be 2% greater than in the fall of 1960 and 11% above the 1950-59 average. Realization of the 2% increase, along with the number of pigs per litter equalling the average with an allowance for an upward trend, would mean a 1961 fall pig crop of about 42,500,000 head. This would be a gain of 3% above 1960 and 14% above the 10-year average.

Spring Plus Fall

The combined pig crop for 1961 has been estimated at 92,956,000 head, a jump of 5% over last year and 1% above average. USDA reports that the 1961 spring crop totaled 50,456,000 head, an increase of 7% over the 1960 spring crop. Sows farrowing during the spring months totaled 7,031,000 head—4% above the spring of last year, but 12% less than the 1950-59 average of 8,016,000 head.

Pigs per litter set a record this spring. The average was 7.18 compared with 6.96 a year earlier and 6.82 for the 1950-59 average.

USDA says the number of hogs

(Turn to PIG CROP, page 93)

Egg-Type Chick Production Drops Behind 1960 Pace

WASHINGTON—May was the first month this year in which egg-type chick production by commercial hatcheries was below the corresponding month of 1960. And it was no little dip. The U.S. Department of Agriculture's latest hatchery report shows that the 85,079,000 egg-type chicks hatched last month amounted to a cut of 15% compared with May of 1960.

That's quite a contrast compared with April, when the 1961 hatch for the month was up 6% from 1960. Furthermore, it's likely that June's hatch of egg-type chicks will be trimmed even more than the 15% in May. USDA's count of eggs in incu-

(Turn to CHICKS, page 89)

Spencer Kellogg's Sales, Earnings Up

BUFFALO — Spencer Kellogg & Sons, Inc., has reported that its earnings and sales for both the third quarter and the first three quarters of its fiscal year were higher than year-ago levels. The company's fiscal year ends Aug. 27.

For the three months ended May 27, net earnings rose to $309,702, equal to 25¢ a share, from $286,477 or 23¢ a share, in the like 1960 period. Sales in the latest quarter increased to $36,018,877 from $30,992,879 a year earlier.

(Turn to SPENCER KELLOGG, page 93)

Third Quarter Earnings Up for Central Soya

FT. WAYNE, IND.—A gain in net earnings at Central Soya for its third quarter ended May 31, 1961, was reported by Harold W. McMillen, board chairman.

Mr. McMillen said that net earnings for the quarter amounted to $1,253,702, after provision for income taxes totaling $1,355,851. This compares favorably with second quarter profits of $1,195,540 and with the

(Turn to CENTRAL SOYA, page 89)

Pennsylvania Bill Could Curtail Sale Of Medicated Feed

EPHRATA, PA.—Manufacture and sale in Pennsylvania of livestock and poultry feeds which contain medication could be seriously curtailed or discontinued if a bill before the state legislature were to become law, according to a bulletin issued to members of the Pennsylvania Millers & Feed Dealers Assn.

Donald W. Parke, executive secretary of the group, urged members to contact their legislative representatives and insist upon an amendment

(Turn to PENNSYLVANIA, page 93)

Movement of Grain To Be Resumed

By ROBERT H. BROWN
Feedstuffs Special Correspondent

KNOXVILLE, TENN. — Movement of grain is expected to be resumed on the Tennessee River in a week or ten days, officials of the Tennessee Valley Authority said. Temporary measures have been taken to route the grain around the collapsed lock at Wheeler Dam, Ala.

(Turn to GRAIN, page 89)

FEEDSTUFFS *Features This Week*

MEETING CHALLENGES—This Indiana feed man has a five-point plan to meet the challenge of change in trade conditions. **Page 18.**

NITRATE POISONING—Nitrate or oat hay poisoning is discussed in an article appearing on **page 28.**

BEEF FINISHING RATIONS—Research on high-concentrate, low-fiber finishing rations for beef cattle is discussed on **page 36.**

PLANT FEASIBILITY—Reports on a feed plant feasibility workshop held at Kansas State University begin on **page 42.**

DELIVERY CHARGES—This feature is a survey of charges feed men make for delivery service. **Page 50.**

GRAIN BANKING—A study of grain banking operations appears on **page 52.**

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Top of the Hopper

THE GENERAL TREND in feed manufacturing facilities in recent years, over most of the country, has been toward smaller plants serving nearby feeders. However, as feeding operations increase in size and become still more concentrated, possibly there will be some swing back to larger plants. Presumbly, they would still serve nearby areas, but these areas would account for more tonnage than formerly.

At any rate, one competent industry observer recently mentioned possibilities along this line, at least in some areas. He noted that a few of the newest plants, serving mostly some rather concentrated poultry areas, are of the large type again. Another observer also mentioned that he still thought that a mill producing about 60,000 tons a year would be optimum for feed manufacturing operations in some sections in the years ahead.

A MARKETING EXPERT for a packing company pointed out recently that his firm is now operating under a marketing concept. And policy decisions will be in the hands of marketing people rather than production people. Formerly buying was controlled by production people, and plants were geared in size to be able to handle periodic gluts in livestock marketing. All of these things are changing now—which is another indication that feed men and their customers must tune their thinking and operations more to uniform, steady supplies of livestock, produced to meet specifications.

Incidentally, the packer said that his firm does operate some feedlots, "where that is the only practical way to get the type of animal we want," but that growing out of animals is a specialized job which the packing firm would like to leave to livestock producers.

THE SECRETARY of the Northeastern Poultry Producers Council, Dick Ammon, has some interesting comments as possible approaches to the farm problem and farm programs. After commenting on some of the reasons for opposition to the administration's omnibus farm bill, Mr. Ammon says, addressing his remarks to the Secretary of Agriculture:

". . . Your order of approach in this legislation has been for national farmer advisory committees working with USDA to formulate commodity programs which would then be reviewed by Congress and finally voted upon by the producers in a national referendum.

"Let's reverse that order. Let's hire a reputable third party of unimpeachable integrity—like Elmo Roper or George Gallup—to conduct a nationwide poll of farmers on the question of whether or not they want 'supply management' by governmental decree. The cost shouldn't be very high in comparison to what you fellows are spending these days, and think of the benefits such a poll would produce:

"1. It would give both USDA and the Congress a measure of farmer opinion unattainable in the emotion-filled hearing rooms or almost anywhere else, save the farmer's own kitchen—one which all the witnesses in Washington could never refute.

"2. It would indicate once and for all which of the national farm organizations are accurately reflecting farmer opinion.

"3. It would tend to unite our whole agricultural community, for hundreds of commodity, regional, state and local farm organizations—NEPPCO included—would be influenced in their policy determination by such a survey.

"4. It would unquestionably unearth other constructive alternatives for solving agriculture's sticky problems.

"How about it, Mr. Secretary Let's put the horse before the cart. Let's

(Turn to TOP OF THE HOPPER, page 94)

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

Feed manufacturers across the nation report business volume this week is on about the same level as last week. And, that volume is above the volume for the same week a year ago in most cases.

Some areas report business to be off slightly and others, notably the Southwest, indicate an upswing in business volume.

There are some reports of a tapering off in demand for broiler feed, but volume continues at a high level. Poultry feeds in general are moving well and hog feeds are continuing to make good showings in swine raising areas.

Indications are that prices will be about the same to slightly lower.

The wholesale feedstuff price index declined to 83.0 this week from 83.2 a week earlier and compared with 73.2 of a year earlier. The feed-grain index also declined. It was 63.1 this week as compared with 63.7 a week earlier and 66.2 a year before.

The hog-corn ratio edged up to 14.8, based on Chicago prices, from 14.5 last week and compared with 13.8 a year ago. (Major feed market review and ingredient quotations appear on pages 90-92.)

Northwest

Feed business in the Northwest was steady to off some from the level of last week. Few manufacturers were unhappy over the level, though, as it was higher than last year in most cases.

The poultry feeds, turkey, broiler and layer, and hog feeds were moving well in this area. One manufacturer reported a relatively high level of cattle feed moving for this time of year.

Prices will be unchanged to off 50¢.

There was some concern that the price of middlings might take a jump if flour milling volume is cut due to the maritime strike tying up export shipments.

Southwest

Feed business in the Southwest was fully up to the previous week with many mixers reporting a pickup. Mill operations are on a five day basis and there were isolated reports of some Saturday operations.

The increase in business was not centered in any one business but instead covered the full list. Turkey feeds are moving exceptionally well and hog feeds are another volume item. Pig feed volume is showing signs of tapering off but it is still of significant quantity.

Some trade sources reported that complete feeds were selling better. This contributes to the better total volume and it is felt that this situation should continue with feed grains in the area scarce and reasonably high priced.

Rain has hampered the wheat harvest in many areas and the full impact of harvest operations on formula feed volume has not been felt as yet.

Northeast

Demand for formula feeds held about steady with the previous week's turnover. However, a spokesman for one good-sized feed manufacturer said his company's sales, so far in June, have kept pace with May, which was the best month in the manufacturer's history.

Mixers are shipping a lot of dairy feeds as demand remains good because of cold, wet weather in this region. Some pastures are more nutritious than they were three weeks ago, but offerings of 14% protein dairy feed supplement continue to be well taken.

Egg mashes moved in good volume as did growing and turkey feeds.

Egg prices turned steady to slightly higher and growers are bent on keeping their laying flocks.

Broiler prices staged a fairly good comeback, with levels at Delmarva moving up to 13.8¢ lb. and as high as 15.4¢. One spokesman said, "I hope the roughest part of the market is over for the sake of both growers and feed dealers."

The recent inclement weather in this area has dimmed crop prospects. Corn won't be "knee-high" by July 4, and oats, delayed in planting, may have its quality impaired if the weather turns hot during July.

Southeast

Formula feed business in the Southeast continues to be reported as being about unchanged to a little on the slower side. Even though the growers are cutting back on chick replacements, broiler feed manufacturers' running time is still above normal due to the number of broilers on feed.

Most of the Southeast has had rains during the last week which has greatly improved pasture conditions, slowing down purchases of dairy and cattle feeds. Most major feed ingredient buyers continue to buy their proteins on an as-needed basis.

Corn prices advanced 5¢ bu. this week although buying interest was on the slow side as manufacturers were more or less content to use up their inventories. Buying interest from Texas for cottonseed hulls in the Mississippi Valley is causing a firmer tone with prices advancing $1 per ton. The broiler market is improving and prices paid this week were as high as 13¢ lb., an increase of 1¢, but even the good operators are still operating at a loss.

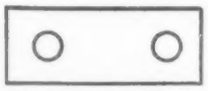
Practically all citrus pulp producers in Florida have completed this year's operations and have advanced prices to take care of their additional cost in handling shipments from inventory. The movement of pulp has slowed down considerably because most feed dealers, anticipating the price rise, built up their inventories at the $32.50 to $35 level and are now selling mostly from inventory which will slow down the movement from the processor until about the middle of July.

Central States

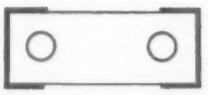
There does not seem to have been any apparent letdown in the demand for commercial mixed feeds as a whole during the week . . . while it is true that there has been some falloff in one line or possibly two, this has been fully offset by broadening in demand for one or another of the balance of the line.

The one which has suffered the most, of course, has been broiler feeds. The recent dip to well under the 11¢ mark seems to have resulted in a very sharp curtailment in the demand for that type of feed, al-

(Turn to MARKETS, page 95)


Strap Hammer. Heat treated, not hardfaced.

Strap Hammer with hardfaced ends.


Strap Hammer with hardfaced ends and edges.

Serrated Edge Hardface Hammer with hardfaced ends

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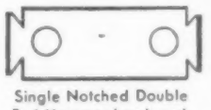
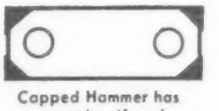
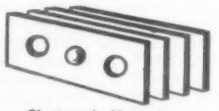

Single Notched Double End Hammer hardened, not hardfaced.

Single Notched Double End Hammer with hardfacing.

Notched Hammer hardened, not hardfaced.

Notched Hammer with hardfaced ends.


Capped Hammer has corners hardfaced.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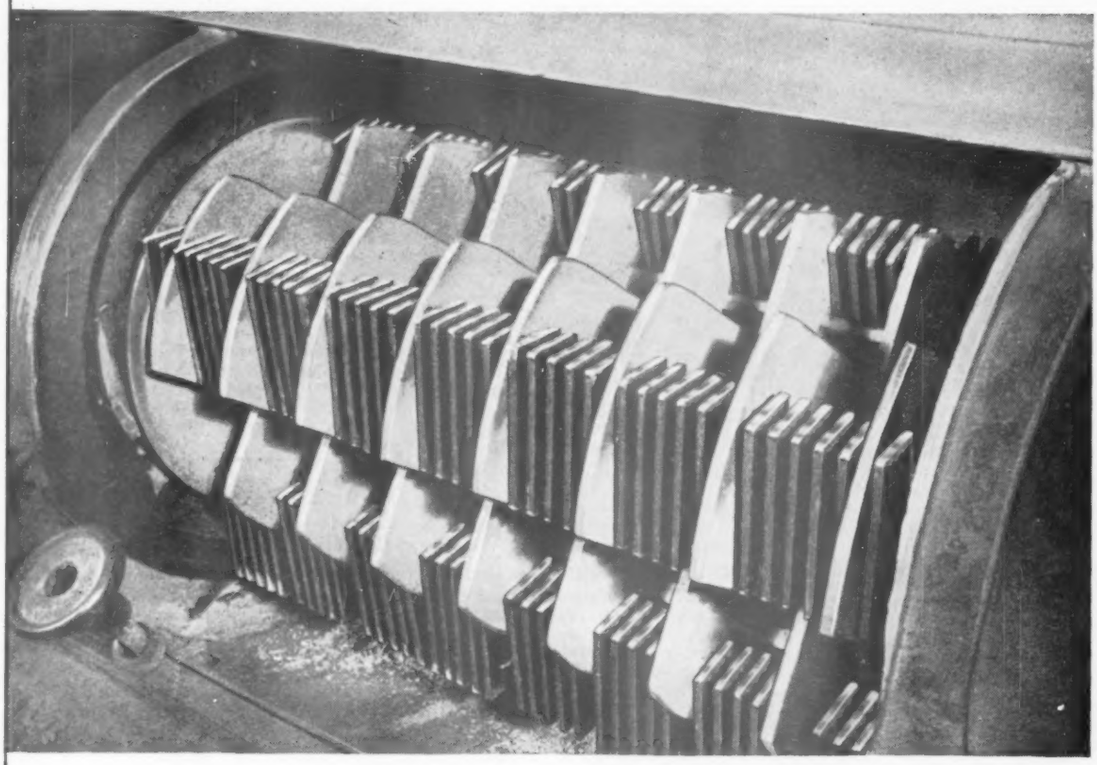

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Alabama Poultry and Feed Men Urged to Fight Control Proposals

By ROBERT H. BROWN
Feedstuffs Special Correspondent

MONTGOMERY, ALA.—The omnibus farm bill is ready to wrap the tentacles of socialism around the broiler business "just as they have been wrapped around everything else on the farm," and the industry had better watch its step, never relenting in its fight, or it will get controls whether it wants them or not, a South Carolina poultry producer charged in a speech at the opening session of the meeting of Associated Poultry Industries of Alabama.

Harvey Green, past president of the American Poultry & Hatchery Federation, a grower and hatcheryman from Spartanburg, S.C., warned poultrymen that it is so easy to get into controls and so hard to get out of them that the industry had better know just what it is doing before endorsing anything pertaining to government controls.

"Don't sign the slightest piece of paper without knowing just what that piece of paper calls for," he admonished the poultrymen.

Don't endorse controls of any kind for the poultry industry without understanding fully the consequences and how it will affect the industry, he urged.

Poultry is one of the last farming operations free of controls "and let's keep it that way," he said.

Charges Pressure Tactics

He charged pressure tactics are being used in Washington to push through the farm bill and that members of Congress as well as farm leaders are being told to back the bill or "don't come to us asking any favors in the future."

He accused the Agriculture Stabilization Committee of being openly used to support the omnibus bill.

"I am not here to deliver a diatribe against the omnibus bill alone; I am here to deliver a diatribe against the whole rotten mess," he said.

"Unless you want to give the Secretary of Agriculture control over everything on the farm, you had better be sure of what you are for.

"The broiler business is faced with troublesome times for sure if the present trend of socialism continues in America," he charged.

More than 200 members of the industry were on hand to hear Mr. Green and other speakers. The Alabama Feed Assn. also held its annual convention in connection with the meeting.

The association is made up of growers, processors and feed men.

The convention was to deal with union-labor management, communications with personnel, condemnations and the outlook in the industry for the next five years.

Employee Relations

While pointing out that union activities in the South are not a major problem at this time, Dr. Nicholas A. Beadles, College of Business Administration, University of Georgia, urged that industrymen take note of employee relations now.

He urged better relations with employees by finding out what they are thinking, and while employers think of wages as the big problem with workers, surveys show that actually this is not the number one problem with them. They are looking for better working conditions and certain fringe benefits more than wage negotiations, he said.

Much of his talk dealt with the new wage structure soon to go into effect and whether small growers and processors are actually covered under the new wage measure.

He urged members to find out exactly where they stand, as to whether they are covered or not. A grower or a processor may think he is engaged in intrastate commerce when he isn't, he said. There is a fine point of distinction between the two.

"The best thing you can do in negotiations with workers is to stick to the facts and never refuse to bargain. You must develop a policy of truthfulness and facts in dealing with workers," he said.

Keep Records

It is most important these days for employers to keep accurate records of employee relations. Records should be kept for three years. These records should consist of instructions to workers, wage and hour figures, production and other data, he said.

If an employee is falling down on the job, a written memo should be sent to him and a copy of the memo should be kept in the office. Then call him in for a talk, if desired, but have the record on hand for future use.

Employees today are looking for three things of more importance to

(Turn to ALABAMA, page 89)

AFMA NUTRITION RESEARCH AWARD—Dr. Roy S. Emery (left), Michigan State University, receives the first American Feed Manufacturers Assn. $1,000 award made in 1961 for outstanding contribution to nutrition research. Presentation of the award was made by Dr. J. Wesley Nelson, chairman of the AFMA Nutrition Council and director of research for Nutrena Mills, Inc., Minneapolis, during the 56th annual meeting of American Dairy Science Assn. Dr. Emery was selected for the signal honor by the awards committee of the science association. Chairman of the selection committee was Dr. Erle E. Bartley (right), Kansas State University, 1957 recipient of the same award. The meeting was held at the University of Wisconsin.

Houston Selected for Midwest Convention

KANSAS CITY — Official announcement was made this week of the choice of Houston, Texas, as the convention city for the 1962 annual meeting of the Midwest Feed Manufacturers Assn. The dates are Jan. 28-30.

W. L. Alley, president of the association, said the choice of the Midwest executive committee was made in response to a demand from members, as expressed in polls conducted during the past two years.

In selecting Houston, Mr. Alley said, the committee also had in mind the importanace to the association of the Texas area and was responding to an invitation from members in that section to hold a convention in Texas.

"In view of these circumstances the Midwest executive committee felt that a change from Kansas City, where most of the association conventions have been held, was desirable and overdue," Mr. Alley said.

W. R. Archer, Jr., Uncle Johnny Mills, Houston, will be convention chairman, assisted by Charles Harris, Burrus Mills, Ft. Worth, who is vice president of the association.

The meeting will take place at the Shamrock-Hilton Hotel. The annual directors meeting will precede the convention on Jan. 27. The following day there will be several special events, including a trip down the Houston ship canal and a visit to the San Jacinto memorial. The convention sessions will begin Jan. 29 and conclude with a luncheon on Jan. 30. A special "South of the Border" party is planned for the evening of Jan. 29.

Publicker-USDA Corn Terms Still Uncertain

WASHINGTON — The terms of a possible agreement between the U.S. Department of Agriculture and Publicker Industries, Inc., Philadelphia, involving the sale of surplus corn for industrial alcohol production appeared to be still uncertain this week.

Renewed activity on the corn-sale plan entered negotiations after it was learned that a 2,018,424 gal. molasses shipment to Publicker from Cuba has been unloaded in New Orleans.

Government officials were said to be anxious to cut the dollar earnings of Fidel Castro's Cuban government as well as to keep Publicker's 700 workers employed. USDA has been considering a contract for selling Publicker surplus corn to keep the firm operating without the use of Cuban molasses.

It was reported that there is no legal barrier to imports such as the molasses shipment received by Publicker and the U.S. government has no recourse at this time. In the future, however, the government might embargo all Cuban imports, but such action was considered highly unlikely here this week.

Again it is said that the failure to complete the Publicker contract with USDA for corn is involved in an accounting procedure jungle. As previously reported, USDA wants to hold profits on the corn transaction to 2% after taxes but, according to reports, Publicker contends that it has a broad over-all accounting cost problem and would not be able to nail down this individual transaction within the narrow limits of the USDA contract proposal.

It was further learned this week that USDA has submitted a contract provision which would terminate any agreement if Publicker were to obtain Cuban molasses.

Trade sources here believe Publicker's latest receipt of Cuban molasses was designed to stimulate USDA to action or to modify restrictive contract terms.

Low Prices Cause Broiler Cutback

SALISBURY, MD.—Broilermen are responding to low prices with cutbacks in broiler numbers. Settings in the 22 reporting states totaled 53,302,000 eggs during the week ending June 17, which was 2% below the previous week, but 4% above the corresponding week a year ago. Cutbacks in Delmarva were greater.

Placements of chicks in the 22 states totaled 41,273,000, which is 1% below the previous week but 7% above the same week a year earlier. Eleven states reported reductions in chick placements, and 17 states cut back their settings from the previous week.

In Delmarva, where the average price per pound last week was 13.31¢ (up from 12.75¢ a week earlier), growers started 4,132,000 birds. This was 1% below the previous week and 8% below the corresponding week of last year. Settings in Delmarva were 3% below the previous week and 8% below the comparable week last year.

States reporting sizeable decreases in egg settings included Connecticut, Georgia, Oregon, Mississippi and California. Sizeable decreases in chick placements were reported by Georgia, Texas, Pennsylvania, South Carolina and Washington.

Broiler, Egg Prices Show Strength, But Turkey Market Dips

Broiler prices picked up some strength this week and the nation's egg markets were firm compared with the previous week, but turkey markets showed signs of further weakness, the U.S. Department of Agriculture reports.

Broiler prices advanced 1¢ to a mostly 13¢ farm level in the South at the close of the June 15-21 period. Delmarva paying prices trended steadily upward during the week and averaged approximately 1½¢ higher, with most sales ranging from 14.9¢ to 15.2¢ at the close.

Egg prices advanced as much as 2¢ in major producing areas of the Midwest and as much as 3¢ in the Northeast.

Prices reported paid for turkeys at farms in Minnesota for the week ended June 21 were: Young hens, mostly 18¢, down about 1¢ from the week before; young toms, 16-17¢ down about 2¢; fryer-roasters, 17-18¢, steady to 1¢ lower.

Frozen ready-to-cook movement for the coming July 4 holiday was moderate.

Pfizer Names Research Section Manager

NEW YORK—The appointment of Dr. J. E. Fahey as a section manager in the newly created agricultural research department at the Pfizer Medical Research Laboratories at Groton, Conn., has been announced by Chas. Pfizer & Co., Inc. It was one of several research appointments in various departments at Groton which were announced by the drug and chemical firm headquartered here.

Dr. Fahey formerly was assigned to Pfizer's biologics production and control laboratories at Terre Haute, Ind., as manager of the influenza vaccine and bacterial products department. Dr. Fahey joined the company in 1957.

Oregon Birds Die

MEDFORD, ORE.—An estimated 3,000 or more chickens died in Jackson County from heat prostration, county agricultural agents reported here.

The deaths occurred during a three-day period of temperatures of 103 to 109 in the Medford area.

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DECEMBER 16, 1957

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University of Alberta Reports Results of Swine Research

EDMONTON, ALBERTA — The University of Alberta has just held its 40th annual Feeders' Day here.

Reports of research in the swine area include: The Influence of Feed Additives on Reproductive Performance of Sows and on the Performance of Their Litters, Source of Protein in Rations of Pigs Fed Inside or Outside, Effect of Winter Climate and Type of Shelter on Growing-Finishing Swine, Supplemental Fat in Rations for Swine and Restricted Feed Intake for Finishing Pigs.

Reports on beef cattle, dairy cattle and sheep will appear in a later issue of Feedstuffs.

THE INFLUENCE OF FEED ADDITIVES ON REPRODUCTIVE PERFORMANCE OF SOWS AND ON THE PERFORMANCE OF THEIR LITTERS—With an estimated 80 to 90% of pig losses occurring prior to weaning, Dr. J. P. Bowland undertook this test on the use of therapeutic levels of antibiotic feed supplements and similar feed additives such as nitrofurans in the rations of sows for a period prior to farrowing. The hope was that there would be a reduction in bacterial infections in the sow and that in the transfer of antibiotic in the colostrum and milk to the young pigs there would be a lower incidence of scouring and improved litter performance.

Also studied was the relative value of newer antibiotics and other bactericidal additives in the rations of young pigs prior to weaning and immediately post-weaning. Two frequencies of giving injectable iron for anemia prevention in young pigs were also studied.

He said that his study showed that addition of 200 gm. of Aureomycin per ton of ration for an eight day period starting at the 111th day of gestation reduced the incidence of scouring in the litters up to weaning at four weeks of age as compared to the scouring of litters from sows receiving no supplemental antibiotic in the feed. The use of high level antibiotic for the sows had no other desirable effect on performance of the sows or of the litters up to eight weeks of age, the report said.

Dr. Bowland said, "As a general recommendation, it appears that the use of a high level of antibiotic supplement or similar additive for a period before and after farrowing might be beneficial in herds where scouring and similar disease problems were prevalent among the newborn pigs."

Dr. Bowland's other summary comments follow:

The addition of 40 gm. per ton of antibiotic as either tylosin or as a combination of Aureomycin and Terramycin in the creep feed and starter ration of pigs had no effect on rate of gain, feed intake, efficiency of feed utilization or scouring when compared with litters receiving creep feed and starter rations with no supplemental antibiotic.

The addition of therapeutic levels of 250 gm. per ton of furazolidone improved feed consumption and rate of gain in weaned litters from four to eight weeks of age.

The injection of iron either as an iron dextran complex in one dose of 150 mg. iron at three days of age or as an iron dextrin complex in two doses of 100 mg. each at 3 and 10 days of age resulted in satisfactory average hemoglobin levels and rate of gain in pigs weaned at four weeks of age.

SOURCE OF PROTEIN IN RATIONS OF PIGS FED INSIDE OR OUTSIDE—This study was undertaken to compare the rate of gain, efficiency of feed utilization and carcass quality of (1) growing-finishing pigs fed rations containing protein supplements of soybean oil meal or of mixed soybean oil meal and meat scrap, (2) finishing pigs fed a balanced ration or an all-wheat ration and (3) growing-finishing pigs fed a relatively low protein ration supplemented with meat scrap on pasture, on dirt or inside on concrete.

Results, as reported by J. P. Bowland, R. T. Berg and J. M. Asplund, are:

Rate of gain, efficiency of feed utilization and carcass characteristics were similar for pigs fed 16-17% protein growing and 13-14% protein finishing rations (N.R.C. nutrient requirements). The rations were based on wheat and protein supplements of straight soybean oil meal, 80% soybean oil meal-20% meat scrap, 60% soybean oil meal-40% meat scrap or 20% soybean oil meal-80% meat scrap. Increasing protein levels to 20% in the growing period and 16% in the finishing period did not influence the rate of gain or efficiency of feed utilization but did reduce shoulder and loin fat and increase area of loin muscle.

Pigs fed a 13.2% protein wheat finisher ration supplemented only with minerals and vitamins A and D gained more slowly and less efficiently and had much poorer carcasses than pigs fed a balanced standard finisher ration with 14.5%.

Growing and finishing pigs fed a grain-meat scrap ration containing 14% protein in the growing period and 11.5-12% protein in the finishing period gained equally rapidly and efficiently on oat or rape pasture, in a dirt lot or inside on concrete. With inside raised pigs, feeding higher protein levels (20% grower-16% finisher) or feeding protein of a mixed source at the same protein levels of 14-12% improved rate of gain over the meat protein alone. Carcass quality was somewhat superior for pigs

(Turn to SWINE, page 24)

POULTRY LOSSES SOAR DURING HEAT WAVE

SAN FRANCISCO—A sudden heat wave in northern California, although lasting less than two days, brought poultry losses estimated as high as $400,000 as well as crop damage to area farmers.

That loss estimate was given by University of California agricultural specialists.

The unexpected heat, which sent the mercury to its highest levels in 48 years—as high as 101 in San Francisco and 112 elsewhere—caught farmers completely unprepared. Chickens and turkeys were killed by the thousands. Poultry losses were estimated at 300,000 birds in Sonoma and Santa Clara counties, where temperatures reached 110. Some poultrymen reported losing one-third to one-half of their flocks during the heat wave, the likes of which have not been seen in northern California since 1913.

The June 14-15 heat wave began to break by the second afternoon and the mercury was back at a normal level June 16, saving further losses.

Attendance Prizes

CLEVELAND, OHIO—Three Sears Kenmore sewing machines will be awarded as attendance prizes at the American Home Economics Assn.'s annual meeting June 27-29 at the city auditorium in Cleveland. Approximately 5,000 home economists from throughout the nation are expected to attend the convention.

Delegates may register daily for the machines at Booth 1561, where the National Cotton Council and the Textile Bag Manufacturers Assn. will have a display on cotton bag sewing.

Letters to the Editor

The Case of the Disappearing Turkey

Malvern, Iowa

To the Editor:

All that we have read in the press releases so far this year is that we have over-produced the market for turkeys. I wonder if it is not time that we start looking at what is happening in regard to the consumption of turkeys in this country.

If our government figures are correct, we started this year with 13,001,000 lb. of turkeys more in storage than we did in 1960. From Jan. 1, 1961, to June 7, 1961, we have processed in this country 199,303,000 lb. this compares with 128,580,000 lb. during the same time in 1960. Our storage holdings were up 19,956,000 lb. June 1 over June 1, 1960. Somewhere a lot of turkey has disappeared.

Our storage holdings have increased over the corresponding date of the previous year by less than 7 million pounds (from 13,001,000 to 19,956,000), but during the same time the turkeys processed have increased 70,723,000. The question is "What has happened to the 63 million pounds that has not been accounted for by the government figures?"

D. D. Martin,
Martin Milling Co.

General Mills Feed Unit Names Director of Overseas Operations

MINNEAPOLIS—To take advantage of the expanding formula feed business abroad, Arnold van Rossem has been appointed to the newly-created position of director of international operations for the feed division of General Mills, Inc., Minneapolis, it was announced by E. E. Woolley, company vice president and general manager of the feed division. Mr. van Rossem has been employed by the feed division since August, 1954, as export sales manager with offices in Coral Gables, Fla. He has moved to Minneapolis, headquarters of the feed division, in his new capacity. He received a B.S. degree in tropical agriculture and animal husbandry in 1952, and a M.S. degree in 1953 from the Agricultural University at Wageningen, the Netherlands. Following a year of study in agricultural economics at the University of Minnesota, Mr. van Rossem joined General Mills.

Arnold van Rossem

"We have been very active in feed exports to Latin America since 1954," said Mr. van Rossem, "but opportunities are increasing all over the world. We see a tremendous growth in total exports because of rapidly growing population, improved standards of living and increasing acceptance of formula feeds abroad.

"Since 1955, export volume of formula feeds has increased tremendously, and I foresee substantial gains in the next five years."

Dr. Jose Santivanez will replace Mr. van Rossem as export sales manager in Coral Gables. Dr. Santivanez was formerly dean of the Veterinary School at the University of San Marcos in Lima, Peru; served as assistant veterinarian in an animal hospital in New York City; was manager of the veterinarian department of Parke Davis & Co. in Mexico and was manager of Eaton Laboratories in Mexico City at the time of his appointment with General Mills.

Broiler Men Try to Ride Out Prices Without Reductions

By JESS F. BLAIR
Feedstuffs Special Correspondent

NACOGDOCHES, TEXAS — Broiler growers in this area of east Texas are trying to ride out the low prices without too much reduction of flocks. Despite this, however, a few companies are leaving the houses empty two weeks after the birds are sold.

Frank Cisco, president of the Southwest Poultry Exchange, says this will bring about a 20% reduction, since the growth period is about eight weeks.

"This is not a widespread movement here," he said, "but I know some producers are doing it."

Mr. Cisco said most broiler companies were doing all right until the recent price break. Now most of them are holding on and hoping for the best. In taking a long range outlook for the industry, Mr. Cisco indicated some are wondering if one of two things will happen: (1) The government will set up controls, and (2) the major feed companies will gradually gain more control of the industry.

Mr. Cisco thinks the small producer is tied too closely to the banker and loan company to ride out a series of price breaks. Bankers are taking a long range view of the broiler situation and may decide their money is safer if invested in other enterprises.

Though some have this viewpoint, it is not shared by all broiler men. Some contend that the small integrated company can make feed cheaper and also operate more efficiently.

Almost everyone agrees that production costs cannot be substantially reduced, at least not in the near future. A few dealers say that broilers can be grown for around 13¢ lb., but this is set at near 14¢ by others.

It all depends on the breaks, one dealer pointed out. Sometimes the weather is perfect, the chicks get off to a fast start, and everything runs smoothly. With another bunch of chickens, hard luck sets in and the dealer finds costs as much as 1¢ lb. higher than the previous bunch.

Price Break Halts Broiler Increase

NACOGDOCHES, TEXAS—Broiler numbers are slightly down now, but until the recent price break there had been a gradual increase in numbers.

Lavon Sitton, who is a partner in Sitton Brothers Feed Co., estimates that there are anywhere from 4 to 5 million birds on feed in Nacogdoches County. These are grown by about 14 producers operating in the county, though some of the firms are located in adjoining counties. These producers grow out over 95% of the birds. Most farm producers who buy their own feed and sell the birds to processing houses have quit operating.

There are also fewer farm growers on contract than a few years ago. Those who grow birds for the large companies have dwindled in number, though each one is keeping more birds than ever before. Mr. Sitton says most of the houses built the last year or so will hold from 9,000-12,000 birds, though a few will contain 18,000.

Mr. Sitton says complete integration has not made inroads here as much as in Arkansas. At present, there is only about one integrated unit where the firm owns the hatchery, growing houses, feed mill and processing plant. There are only two processing plants in the county. One of these companies has everything but a hatchery, while another is completely integrated except for the processing plant.

USDA Announces Grain Sorghum Sales Policy

WASHINGTON—The U.S. Department of Agriculture has announced it will continue to offer Commodity Credit Corporation-owned grain sorghum after July 1 at about the current sales prices, which reflect $1.87 cwt. on a national average, by selling grain sorghum represented by certificates issued under the emergency feed grain program.

It is the department's present intention, a USDA announcement said, to continue this policy until the 1961 crop becomes available in volume in order to stabilize grain sorghum markets around present levels during the summer period.

"Spot shortages of grain sorghum recently have created supply difficulties for livestock producers in some areas where grain sorghum is a major source of feed. Prices have been trending upward in these areas. USDA's action is in line with its policy to use CCC stocks to ease such situations and to help maintain a reasonable relationship between livestock and feed prices, particularly during the transition to a more realistic balance of feed grain supplies," department spokesmen said.

"The current sales price for CCC-owned grain sorghum in the major producing areas is about in line with corn at the support level for the 1960 crop ($1.06 bu., national average) on the basis of feed value relationships."

Department officials also stated that the grain sorghum sales policy should have little effect on producers of 1960-crop grain sorghum "because virtually all of the crop has been marketed and has passed out of their hands."

Currently, CCC-owned grain sorghum is being offered for sale at the statutory minimum, which is 105% of the 1960 support rate of $1.53 cwt. plus carrying and other charges. Actual sales prices are based on the local support rate at place of storage plus 35¢ cwt. if received by truck or 29¢ if received by rail or barge. While sales prices so derived currently are around $1.87 on a national average basis, they will vary, depending on location, from a high of around $2.50 cwt. at certain West Coast locations to a low of about $1.70 in some Kansas and Colorado counties.

Without the action announced by USDA, the CCC minimum sales price after July 1, based on the 1961 crop price support level, will be about 25¢ cwt. higher than current pricing.

Plans for sales of grain sorghum after this interim period and of corn represented by certificates will be announced later, USDA officials said.

Dr. Salsbury's Expands Canadian Distribution

CHARLES CITY, IOWA—Dr. Salsbury's Laboratories, Charles City, has announced expansion of product distribution in Canada, through Seven Oaks Manufacturing & Sales Ltd., headquartered at Winnipeg. The Canadian company, a longtime Salsbury distributor, recently purchased the firm of J. W. Weber, Ltd., Exter, Ont., also a longtime distributor of Salsbury products.

Under the new arrangement, Seven Oaks distributes Salsbury products in Ontario, Quebec, the Maritime provinces and Newfoundland, as well as in its former distribution territory of Manitoba, Saskatchewan and Alberta.

Max Weiner, president of Seven Oaks, said the facilities acquired at Exeter are being used as a product-distribution branch. Besides the Winnipeg and Exeter offices, the firm maintains a branch at Kitchener, Ont.

Gov. Vandiver Asked Not to Compromise in Georgia-Florida Feud

By Special Correspondent

ATLANTA—Governor Ernest Vandiver has been asked not to compromise the fight between Florida and Georgia over inspection fees and wing tagging of poultry sold in Florida as the feud between the two states continues.

Georgia's governor is scheduled to confer with Florida's chief official, Faris Bryant, at the National Governors' Conference in Honolulu and Alpha A. Fowler, chairman of the House Agriculture Commission, has wired him a request that he delay any compromise and commitment until he returns home and gets a first hand briefing from Georgia poultrymen.

Georgia is threatening to put into effect a 1945 law which would place a retaliatory tax of 10¢ a box on oranges, grapefruit and tangerines if Florida doesn't rescind its fees on outside poultry.

Enters Controversy

Ralph White, executive secretary of the Georgia Poultry Producers Assn., also entered into the controversy last week. He charged that Florida inspectors do nothing to protect consumer standards. He said the state has no state-enforced standards for quality of retail poultry sales and that while Georgia poultry is inspected by the U.S. Department of Agriculture, Florida makes no inspection except to police sales to insure proper pricing by grade and prevent spoilage.

He also assailed the Florida requirement by contending that only one other state, Colorado, inspects chickens shipped into the area.

"Other states accept our chickens without such markings," he said, re-

(Turn to GEORGIA-FLORIDA, page 94)

Bacitracin-Coccidiostat Clearances Noted

NEW YORK — Bacitracin methylene disalicylate (Fortracin) may now be combined with either amprolium or zoalene in poultry feeds, it was pointed out in an announcement by S. B. Penick & Co.

Penick noted that the Food and Drug Administration has cleared the use of the antibiotic at levels of 4 gm. to 50 gm. per ton of feed for growth promotion in combination with amprolium in chicken and turkey feeds, and in combination with zoalene in chicken feeds. (Stories from FDA on clearances on pages 14 and 15.)

Other coccidiostats previously cleared for use with Fortracin, Penick noted, are nicarbazine, arsenosobenzene, Whitsyn, Trithiadol and glycarbylamide.

The Penick announcement was made by Frank Seeland, vice president in charge of the firm's farm chemical division.

Chicago Feed Club Holds Golf Outing

CHICAGO — The Chicago Feed Club held its annual Spring Golf Outing June 20, at the River Forest Golf Club near Bensonville, Ill. In charge of the outing was Bill Rothermel of Merck & Co., the 1961 golf chairman. Members of his committee were Gladwin Read of the Gladwin A. Read Co., Ralph Nash of Bullard Feed Co., Jim Fox of Farm Bureau Milling Co. and Bob Guenther of Armour & Co. One hundred and twenty-seven golfers participated, and 177 members and guests were present for dinner. Forty-seven prizes representing approximately $700 in value were distributed to both the golfers and the arm-chair golfers.

The first golf prize winner with a low gross score of 71 was Charles Dawson of Calcium Carbonate Co. Tied for second and third prize with a low net score of 70 by means of the Calloway System were Albert Falc of International Salt Co. and Mr. Gardner, a guest.

Winner of the prize for the longest drive at the 10th hole was Lloyd VerSteegh of Western Advertising Agency. The closest to the pin prize at the third hole was Mr. Azischous, a guest. Blind bogey prizes were won by Robert Bedier of Distillation Products Industries; Carl Wilkey, Western Condensing Co.; W. F. Mulvaney, Bemis Bro. Bag Co.; Dick Harmon, Michigan Salt Co.; John Mecking, J-M Trading Corp.; Don Sinclair, Sinclair Mineral & Chemical Co., and R. C. Miller, A. E. Staley Mfg. Co.

BROILER BREEDER PLACEMENTS DOWN IN MAY

WASHINGTON—Data issued by the U.S. Department of Agriculture this week show that May was the first month this year in which domestic placements of pullet chicks for broiler hatchery supply flocks by primary breeders dropped below the year-earlier count.

The May total of 3,329,000 chicks was 6% less than U.S. placements of 3,530,000 chicks in May, 1960, but 16% more than in May, 1959.

In the months of January through April of this year, domestic placements ranged from 21 to 38% greater than in corresponding months of last year. For the first five months of 1961, placements totaled 15,152,000 or 18% more than during the January-May period of 1960.

Total placements (domestic plus exports) for May, 1961, were reported at 3,729,000, just a shade less than the 3,788,000 total for May, 1960, but about 23% more than the 3,007,000 figure for the same month in 1959.

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S.E. Board Reviews Association Program

ST. PETERSBURG, FLA. — The board of directors of Southeastern Poultry & Egg Assn. reviewed the entire program of the association here recently, authorized an expenditure for cholesterol education on commercial eggs, and voted to continue opposition to government controls and supports.

The organization's directors, representing the 10 states of the Southeast, met here for its mid-summer board meeting.

The Southeastern group authorized $1,000 to support the Poultry & Egg National Board's special effort on cholesterol education, and urged other industry groups and individuals to give the project their backing as well.

Giving full support to the commodity committees which met prior to the board session, the directors continued opposition to government controls and supports. It was noted that committees representing broilers, eggs and turkeys had all opposed government controls.

The management schools sponsored by Southeastern were reviewed, along with the information program for Southeastern members. Special reports were made on the Southeastern Poultry Times, Management News Letter, and the Southeastern Poultry Directory.

S.E. Group Picks New Convention Site for '62

ST. PETERSBURG, FLA. — The board of directors of the Southeastern Poultry & Egg Assn. has voted to hold its 1962 convention in the new ultra modern Merchandise Mart at Atlanta, Ga.

The action was announced by Norman Sanders, association president from Columbia, S.C., as the organization held its summer board meeting here.

The Merchandise Mart, located in the heart of downtown Atlanta, will double the exhibit space available for the SEPEA show. In addition, the exhibit space for trucks and heavy equipment will be provided in an especially designed ground floor area.

Booth spaces for the convention will be allocated according to the system used in the past, according to Harold Ford, executive secretary of Southeastern, and contracts will be mailed out within the next few weeks.

MODERNIZATION PLANS

BLAIR, WIS.—A $62,000 modernization program, which will include a switch to bulk handling facilities, is planned here by the W.B.I. Farmers Union feed mill. Ed Woychik of Whitehall, and Chet Anderegg, local manager, said that the project is expected to be completed in about three months.

Norris Grain Co. Announces Large Expansion Program

CHICAGO—Bruce A. Norris, president of the Norris Grain Co., has announced an expansion program that involves new construction here and at Kansas City, as well as outright purchases and leasing of additional warehouse space in other areas.

The announcement follows last week's report that the company had sold its grain elevator properties in Chicago to the Garvey Grain Co., and transferred a lease-hold on the Burlington elevator at Kansas City to the same firm.

The expansion program purchases are reported to far overshadow the space that Norris gave up to the Garvey organization.

At Chicago, plans are now being completed by Norris for the addition of 2 million bushels of tank space to its Calumet elevator in the South Chicago area. When completed, the Calumet elevator will have better than 4¾ million bushels of space available. It will be used for delivery on Chicago Board of Trade futures contracts, has both rail and water facilities for the loading and unloading of box cars, vessels which ply the Great Lakes, and the St. Lawrence Seaway and into export channels, as well as barges on inland waterways.

At Kansas City, the Norris organization is now in the process of adding another 1,000,000 bushels of space to the Kansas City Southern Railway elevator. This addition will give it approximately the same capacity as the Calumet plant at Chicago. The Norris elevator at Kansas City holds better than 4 million bushels.

To supplement this terminal grain warehouse space at the Chicago and Kansas City terminals, Mr. Norris also noted that the company has either purchased outright or leased a total of 9½ million bushels of space (at a total of eight separate locations) in the heart of the Southwest grain belt.

The company has operated terminal elevators for many years at Omaha, St. Louis, Memphis, Peoria and Buffalo in this country and in Winnipeg, Manitoba. In addition to its grain merchandising activities, the Norris company operates commercial feed mills at five Missouri points.

Flies Bred on Corpses

MODESTO, CAL. — A 36 sq. mi. area of California's San Joaquin Valley has been infested with flies bred on corpses of poultry that perished during a mid-June heat wave.

Clarence Weaver, Stanislaus County sanitation officer, said the plague of bottle flies, horseflies and house flies is the worst he has ever seen. About 100,000 turkeys were killed in Stanislaus County as temperatures soared as high as 112°, he said.

W. E. Glennon on Food For Peace Council

CHICAGO—W. E. Glennon, president, American Feed Manufacturers Association, Chicago, has been named to the American Food-For-Peace Council. The invitation was extended by George McGovern, director of the program, on behalf of President Kennedy.

The association executive will attend the first national conference of the council in Washington, June 27-28. Approximately 75 other leaders of business and other groups will be present for the session. The meeting will be addressed by congressional leaders, cabinet members and directors of federal and international food and agricultural programs.

The nongovernmental council will provide citizen leadership for both the U. S. Food-For-Peace Program and the Freedom-From-Hunger Campaign of the United Nations Food and Agriculture Organization (FAO).

Mr. Glennon will be representing the 13th largest manufacturing industry in the U. S., and the largest in the world supplying goods and services exclusively to agriculture.

Soybean Support Extended to Co-ops

WASHINGTON—The U.S. Department of Agriculture has announced the extension of price support on 1961-crop soybeans through warehouse-storage loans and purchase agreements to qualified producer-owned and producer-controlled cooperative soybean marketing associations.

USDA said, "The method of extending price support on soybeans to cooperatives will be similar to that followed for several years for cooperatives under the price-support programs for dry beans and rice. Price-support loans or purchase agreements will be made directly to soybean cooperatives on eligible soybeans produced by the cooperatives' members and marketed through the associations.

"The action will make available to producers the benefits that can be derived from marketing and processing methods under cooperative operations. Cooperatives are better able to promote orderly marketing than producers acting individually, particularly during the harvest season when prices are usually the lowest."

Details of this change in the soybean support program will be available soon in an amendment to the 1961 soybean price-support regulations.

$100,000 IDAHO FIRE

BELLEVUE, IDAHO — The Bellevue grain storage elevator owned by Ryan F. Mallon, and 20,000 bu. of grain were destroyed by fire recently. Damage was estimated at $100,000. Cause of the fire was not determined.

Chickasha Decides To Sell Feed and Poultry Operations

FT. WORTH, TEXAS—The president of a Texas concern, looking for someone to buy the firm's feed and poultry division "as soon as possible," was quoted this week as saying, "We made the mistake of trying to start too fast in a new business with a shortage of properly trained personnel."

The Wall Street Journal reported in its June 22 issue that P. A. Norris, president of Chickasha Cotton Oil Co., said, "The feed and poultry operations have lost money consistently. We will have to sell them at a loss, but it will be worth it to be rid of them."

Feed Plant in Oklahoma

Chickasha has operated a feed division for several years and its poultry operations, which involve egg and turkey production, are about 2½ years old. The company owns a poultry farm and feed plant at Chickasha, Okla., and a breeder farm at Kublin, Okla.

It was indicated that problems which led to the company's decision to sell its feed and poultry division were caused by low turkey and egg prices, by an expansion in eggs and turkeys which was "too rapid" and by "the lack of proper supervision and the lack of understanding between growers and the company."

About two years ago, it was reported, the firm increased the number of its layers on contract from a very few to approximately 500,000. Last year, Chickasha expanded the number of turkeys it had on feed from 12,000 to 500,000.

It is understood that nearly all of the layers involved were or are owned by Chickasha and fed on contract by growers. In turkey production, the firm itself has been feeding the birds.

In an interview with a Wall Street Journal reporter, Mr. Norris said sale of the feed and poultry division "is expected to have a favorable effect on future earnings." In its place, Mr. Norris said, the company plans to expand its cotton-ginning operations by purchasing 12 more gins in western Oklahoma and Texas.

Chickasha officials indicated that the firm probably will have to sell the feed and poultry operations in pieces. "We've had no offers for the whole works," Mr. Norris said.

GOLDEN ANNIVERSARY

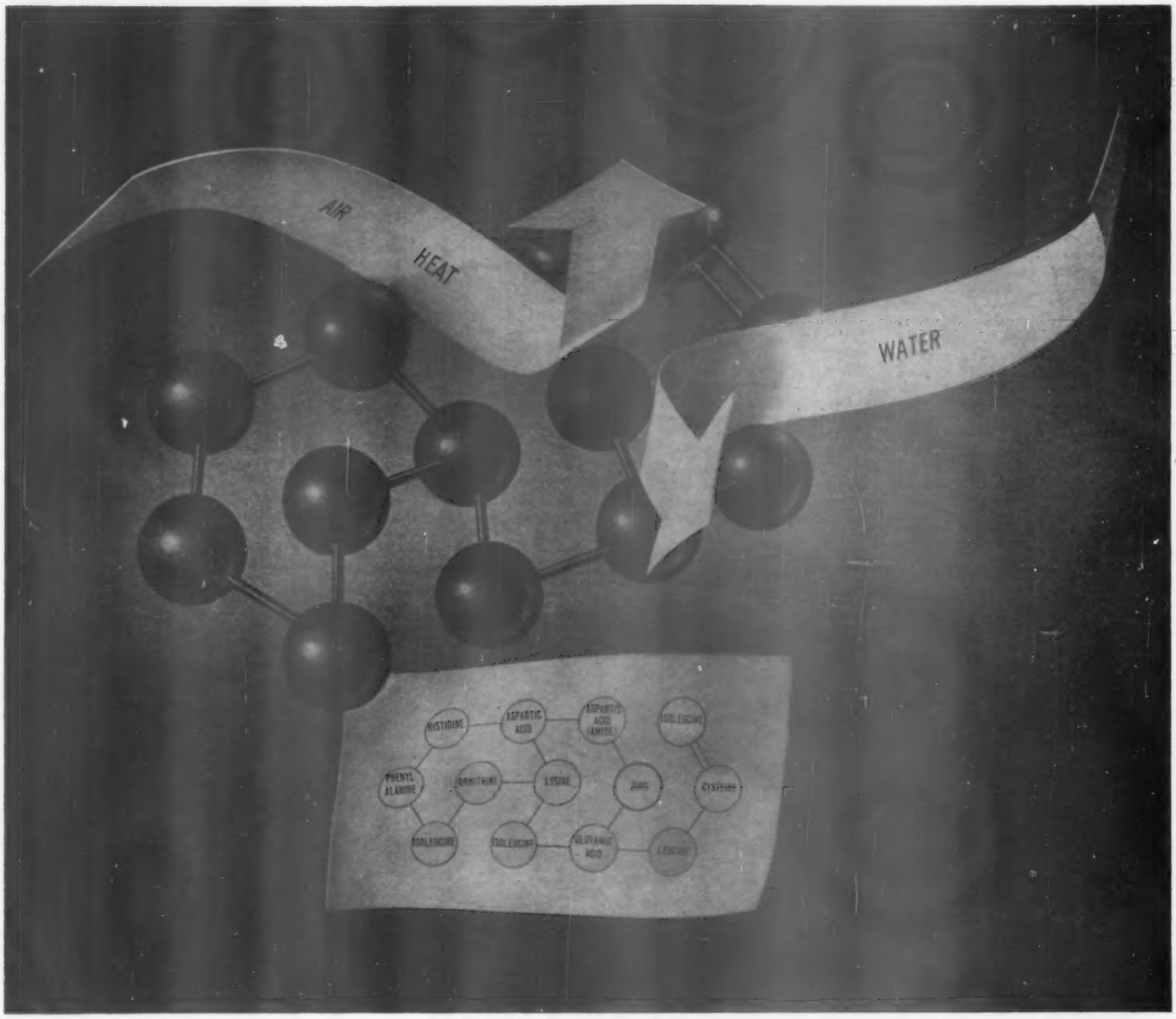
HAMMOND, IND. — Matt Reitz, secretary-treasurer of the M.G.R. Feed Co., Inc., Hammond, and his wife celebrated their golden wedding anniversary recently. Mr. Reitz, who started in the feed business in 1907, organized the M.G.R. Feed Co. in 1938. He served as plant manager of the Central Soya plant at Gibson City, Ill., on a leave of absence from his own firm.

HOOSIER HOSPITALITY AT FRENCH LICK—Topping off a steak banquet, the usual custom at the mid-summer meeting of the Indiana Grain & Feed Dealers Assn. at French Lick, Ind., calls for clusters of delegates and wives in the various hospitality rooms. On hand for the event were the folks shown in these three photos.

The first photo from left to right, shows Don Hart, general manager, Early & Daniel Co., Indianapolis; Mrs. Roland C. Lindsey, Riverside Molasses Co., Cincinnati, Ohio; Lucian Garner, The Quaker Oats Co., Lawrenceburg, Ind.; Mrs. Hart; Mrs. Garner; Mr. Lindsey; Mrs. Don E. Rogers, Feedstuffs, Chicago; F. C. Fernandez, Springfield, Ill.; Mrs. Fernandez, and Don Baughman, Central Soya Co., Ft. Wayne, Ind.

Pictured left to right in the second photo, taken in the Bemis Bro. Bag Co. room, are Mrs. Robert McClain; Mrs. Roland C. Lindsey; Mrs. Lucian Garner, and Mrs. Fred Schardt, Bemis hostess.

Left to right in the last photo, taken in the Central Soya Co. room, are Mrs. Morris Champion, Central Soya Co., Indianapolis; Mrs. John Lamie, Fowler (Ind.) Grain Dealers, and Mrs. C. Scott Martindale, Central Soya Co., Decatur, Ind.



CSC adds zinc to bacitracin and builds a new, stable molecular structure: Baciferm

From CSC research comes the answer to the search for full bacitracin potency. The answer: Baciferm®—a zinc-bacitracin compound, an antibiotic with a totally new and stable molecular structure.

How did CSC research build this new molecule? First, CSC scientists discovered the weak spot in bacitracin's molecular structure. Then, through testing and experimentation, they "hooked" various metallic salts onto this "weak link" to see if they could stabilize it. Many salts were tried — manganese, iron, tin. Then zinc, and it proved to be the answer. Baciferm — a zinc bacitracin — was perfected!

The benefits of this scientific breakthrough. With this unique molecular structure, Baciferm displays unusual stability, retains its full measure of antibiotic activity. In fact, tests have shown that it keeps its full strength for years. Feed processors using Baciferm can therefore forget about any potency loss during the time interval between manufacturing, shipping, mixing, selling, and the actual date of feeding. No antibiotic loss during pelleting with Baciferm.

In short, feed processors can use Baciferm with confidence. It is a sound, stable antibiotic that can be counted on every time.

Would you like more information? Write: Animal Nutrition Department, Commercial Solvents Corporation, 260 Madison Ave., New York 16, N. Y. In Mexico: Comsolmex, S.A., Mexico 7, D.F.

COMMERCIAL SOLVENTS CORPORATION CSC

Names in the News

TWO DIRECTORS ADDED TO BOARD—Two directors have been added to the board of Molinos de Puerto Rico, subsidiary of Nebraska Consolidated Mills Co., Omaha. They are Frank Becerra, Jr., San Juan, general manager of Molinos, and Claude I. Carter, Decatur, Ala., a vice president of Nebraska Consolidated and general manager of its subsidiary, Alabama Flour Mills.

They, together with J. A. Mactier, president of Molinos and Nebraska Consolidated, will form the executive committee for Molinos. Mr. Becerra, who is a native of Puerto Rico with business experience throughout Latin America, was assistant general manager of Molinos from its opening in 1959 until June, 1960, when he became general manager.

Mr. Carter has more than 20 years' experience with Nebraska Consolidated.

Others on the board of Molinos, which operates the commonwealth's only flour, corn meal and animal feed mill, are R. S. Dickinson, chairman; Mr. Mactier, Mrs. Howard Platt, R. K. Anderson and Gilbert C. Swanson, all of Omaha; Harold Prince, L. E. Ray, E. W. Augustine and Judge E. G. Kroger, all of Grand Island, Neb.; Roy H. Parks, Ithaca, N.Y., and Edward M. Curtis, Sr., Beaumont, Texas.

GENERAL MILLS APPOINTS TWO—Appointment of two veteran General Mills, Inc., employees to new positions in the company's feed division has been announced by H. R. Anderson, regional sales manager of the eastern region, whose offices are in Lancaster, Pa.

Paul J. Harding has been named growing and marketing manager for the region with main responsibilities on the Delmarva peninsula. Mr. Harding, who started with the company in 1948, was previously operations control manager for the eastern and southeastern regions.

Edward H. Riley has been named merchandising manager of the eastern region. He started with General Mills in 1949, and was formerly sales supervisor for the eastern region.

BIG DUTCHMAN NAMES DELMARVA OFFICE MANAGER—Robinson L. Helm of Georgetown, Del., has been named office manager of the Big Dutchman Automatic Poultry Feeder Co.'s Delmarva branch, according to Oliver Whaley, branch manager.

Mr. Helm's duties with the Delmarva branch, which has recently moved into new headquarters in Laurel, Del., will include inventory control of the entire line of Big Dutchman poultry equipment, and a complete stock of replacement parts.

JOE HOOPES JOINS KENT FEEDS—Joe Hoopes of Prairie City, Iowa, has joined the sales staff of Kent Feeds according to W. F. Schafenacker, vice president and sales manager.

Mr. Hoopes, who has taught vocational agriculture in Iowa, has been manager of a feed manufacturing plant at Prairie City for the past year.

Joe Hoopes — William P. Mathews

He will be assigned to the firm's Manchester, Iowa, area as assistant territory manager. He will work with John Vermazen, territory manager of the Manchester district.

LOS ANGELES GRAIN EXCHANGE OFFICERS — William P. Mathews, general manager of the Coast Grain Co., Norwalk, Cal., was elected president of the Los Angeles Grain Exchange at the group's 48th annual meeting in Los Angeles.

Mr. Mathews, who has been a grain and feed man for more than 30 years, served the exchange as a director and vice president for the past two years. He has also served two terms as director of the California Hay, Grain & Feed Dealers Assn.

Elected to serve with Mr. Mathews are L. D. Elfelt, Jr., Cargill, Inc., vice president; Jack W. Flammer, J. W. Flammer Co., treasurer, and Gabriel Bass, secretary-treasurer.

RICHARD ATHY JOINS SHERWOOD FEED MILLS—Richard Athy has been appointed production manager of Baltimore mills for Sherwood Feed Mills, Inc., Baltimore, Md., according to announcement by Sherwood Dickinson, president.

Mr. Athy comes to Sherwood after eight years with The American Can Co. of Baltimore.

Mr. Dickinson also announced the appointment of Robert Van Ess, who will be in charge of dairy feed production for the firm's President Street Mill.

INTERNATIONAL MILLING CO. REORGANIZES PERSONNEL FUNCTIONS—International Milling Co., Minneapolis, has announced a reorganization in the administration of personnel functions.

Richard A. Diercks, director of corporate personnel, assumes the newly-created position of director of personnel research. Mr. Diercks, who joined the firm in 1945, has been director of personnel for International Milling since 1952.

Frank T. Madden, plant superintendent for International at Buffalo, N.Y., replaces Mr. Diercks as director of personnel.

As a result of the reorganization, the firm's organization planning department, formerly a separate staff department, will become a section of the personnel department.

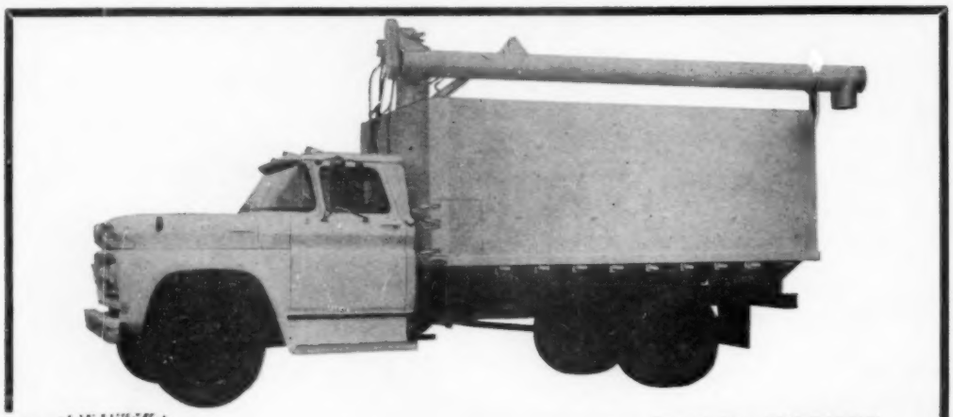
GEORGE LIPPOLD HEADS K.C. SUPERINTENDENTS—George Lippold, Dannen Mills, Inc., St. Joseph, Mo., has been elected president of the Kansas City chapter of the Grain Elevator & Processing Superintendents.

Other officers elected were John A. Dove, Norris Grain Co., Blue Springs, Mo., first vice president; F. Neil Leishman, The Day Sales Co., Kansas City, second vice president, and Melvin Cummins, Salina Terminal Elevator Co., Grandview, Mo., secretary-treasurer.

JOINS ALEXANDER & CO., INC.—Alexander & Co., Inc., Tampa, Fla., grain and feed broker, has announced that George W. Hudgins has become associated with the company as a sales and service representative.

Mr. Hudgins was formerly a sales representative for International Salt Co. in Florida.

Alexander & Co. is an exclusive CDP phosphorus feed supplement



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NEW only PAMCO unloads AND loads from the rear AND front!

PAMCO's Big Daddy . . . another PAMCO first . . . feeds more new profits to your bulk customers with the new PAMCO PROVEN front unloading and loading service. The Big Daddy combines PAMCO's proven auger system with the precision performance of a dual hydraulic system to deliver all types of feed including molasses feeds. Choose the PAMCO bulk delivery truck that best fits your needs . . . PAMCO Back Saver—or—Skoop Skipper with rear unloading AND loading—or—PAMCO Big Daddy with front unloading AND loading.

PAMCO BIG DADDY. Proven close tolerance of tubes and 9" floor auger, 12" upright auger and 9" boom auger. Exclusive front unloading AND loading. Smooth dual hydraulic system. Pellets handled with minimum breakage. Molasses feeds delivered with customer satisfaction.

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George W. Hudgins Ralph Brooks

sales agent for Smith-Douglass Co., Inc., Norfolk, Va., the announcement noted.

CENTRAL SOYA PROMOTES RALPH BROOKS—The promotion of Ralph Brooks to district salesman in east central Georgia has been announced by Central Soya's McMillen feed division, Ft. Wayne, Ind.

Mr. Brooks will make his headquarters in Swainsboro, Ga. As district salesman, he will be responsible for working with Master Mix dealers and farmers.

Mr. Brooks joined the company in August, 1958, as a salesman at the Mascer Feed & Grain Co., Orangeburg, S.C. In January, 1959, he transferred to the McMillen Feed division and has worked extensively in the southeastern states since that time.

He is a 1958 graduate of Clemson College, Clemson, S.C.

SOUTHERN STATES CO-OP NAMES TREASURER—Eugene B. (Bob) Pendleton, Jr., treasurer of the Commonwealth of Virginia since 1957, will join the staff of Southern States Cooperative, Richmond, Va., as treasurer July 1. He will succeed Kenneth R. Eckles who has held the post since 1958. Mr. Eckles will retire from the cooperative's service at the end of July.

E. B. Pendleton

Mr. Pendleton was first named Virginia treasurer in 1957 by the then Gov. Thomas B. Stanley to fill an unexpired term. In 1958, he was reappointed to a full new term by Gov. Lindsay Almond.

Mr. Eckles joined the cooperative staff in July, 1936, as chief accountant. He was named assistant treasurer a year later and moved up to the treasurer's position in 1948.

CHICAGO GEAPS CHAPTER ELECTS OFFICERS—Robert C. Edgren, Continental Grain Co., Chicago, was elected president of the Chicago chapter of the Grain Elevator & Processing Superintendents at the group's June meeting at the Midlothian Country Club in Midlothian, Ill.

Other officers elected, all from Chicago, were W. Everett Sallman, Central Soya, first vice president; Melvin R. Hecker, Complete Electrical Supply Co. second vice president, and B. Ward Peterson, Cargill, Inc., secretary.

Directors to serve for one year are: James A. Anderson, Cargill, Inc.; Raymond L. Ohle, Northwestern Malt & Grain Co.; Gunter Goldschmidt, Continental Grain Co.; David G. Goodwin, Hyre Electric Co., and Benjamin M. Prestholt, Link-Belt Co.

KEYSTONE STEEL & WIRE PERSONNEL CHANGES—Five changes in the merchant trade sales division of the Keystone Steel & Wire Co., Peoria, Ill., effective July 1, have been announced by D. A. Sommer, general sales manager, and W. H. Getz, merchant trade sales manager.

Cecil H. Hawkins of Peoria, Ill., will assume direction of the company's San Leandro, Cal., warehouse operations, following the retirement of C. E. Simon.

Stanley Brock, the district sales director of Keystone's southeast division since 1936, assumes similar responsibilities as sales director for the West Coast division formerly held by Mr. Hawkins. Replacing Mr. Brock as sales director of the Southeast division is H. L. (Bud) Stonner, presently sales representative for the southern Ohio territory. Keith Sanderson, Pekin, Ill., acquires the southern Ohio territory relinquished by Mr. Stonner. Completing sales changes is a territorial addition to Lee Gramm, Bushnell, Ill. He will service 11 additional central Illinois counties.

EASTERN STATES PERSONNEL CHANGES—Russell B. Hayes has been advanced to manager of feed production for Eastern States Farmers' Exchange, West Springfield, Mass., in a move that also brought promotions to three other men at the cooperative's feed mill in Buffalo, N.Y.

Russell B. Hayes E. M. Van Stone Harold Wetzel Thomas Callahan

For the past two years Mr. Hayes has been manager of ingredient purchasing for the cooperative's mills in Buffalo and Huron, Ohio. He joined the feed production department, with headquarters in Buffalo, in 1954 after two years as fieldman.

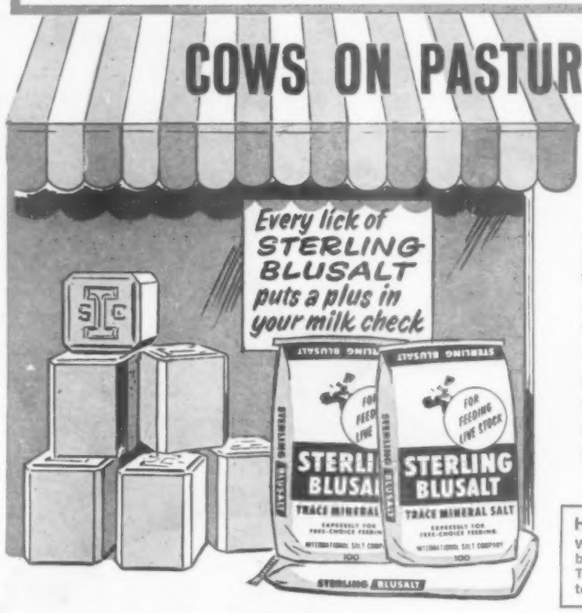
Edward M. Van Stone becomes plant manager of the Buffalo mill. In addition to this new responsibility, he will continue in charge of employee relations, assignment he has held since 1957. He started with Eastern States in its Buffalo mill in 1936.

Harold Wetzel, who has been traf-

(Turn to page 14)

STERLING Summer Salt-Selling Ideas

COWS ON PASTURE NEED MORE SALT!


Every lick of STERLING BLUSALT puts a plus in your milk check
STERLING BLUSALT
TRACE MINERAL SALT
FOR FEEDING LIVE STOCK

Display fast-selling Sterling Blusalt for free-choice feeding

Bags and blocks for the pasture. . . . Stock 'em, display 'em, sell 'em! Increased water intake from pasture grass increases requirement for salt. Also, most pastureland lacks one or more of the vital trace elements. If you're not sure about some local condition, your county agent will be glad to tell you. Put up a sign passing along the information to your customers—and tell them they can make up the deficiency by offering Sterling Blusalt with its seven trace elements.

Here's a free service for your customers!
Write to the International Salt Company for free brochures with plans for salt and mineral feeders. They're easy and cheap to build . . . and your customers will appreciate the service.

Extra Profit Check List

✓ Make a phone call to everyone you know who keeps a few sheep. Explain that Sterling Green'Salt contains 10% phenothiazine for the control of internal parasites. It's a real necessity for a well managed healthy flock in the summer.

✓ Tell the owners of farm ponds this: One block of Sterling Blusalt per acre, tossed into ponds every ninety days, feeds fish and plant life the sodium and trace minerals they need—and can't get enough of from fresh water.

✓ Don't forget that many livestock producers prefer to salt their hay—remind them to buy their supply from you—20 to 40 lbs/ton.

Summertime is a good time to remind the farmers in your area of the advantages of salt-stabilized farm roads and feed lots. Write International Salt Company for pamphlets on this growing salt market.

The use of Sterling Rock Salt (or Halite) on asparagus beds is an old custom. The application of from 1½-2 lbs. per square yard helps control weeds and can stimulate growth. It is advisable to treat bed with lime after salt is used. (Two sales—salt and lime!)

Get in on the profits from water softener salt

Display Sterling Water Softener Salt next to seasonal items—and point out how convenient it is to get this salt from you. Once you get the business, it's a steady, month-after-month profit item for you with no trouble.

For Sterling Farm and Feed Salt products, call our District Office nearest you:
BOSTON BUFFALO CHARLOTTE CHICAGO CINCINNATI DETROIT NEWARK NEW ORLEANS NEW YORK PHILADELPHIA PITTSBURGH ST. LOUIS

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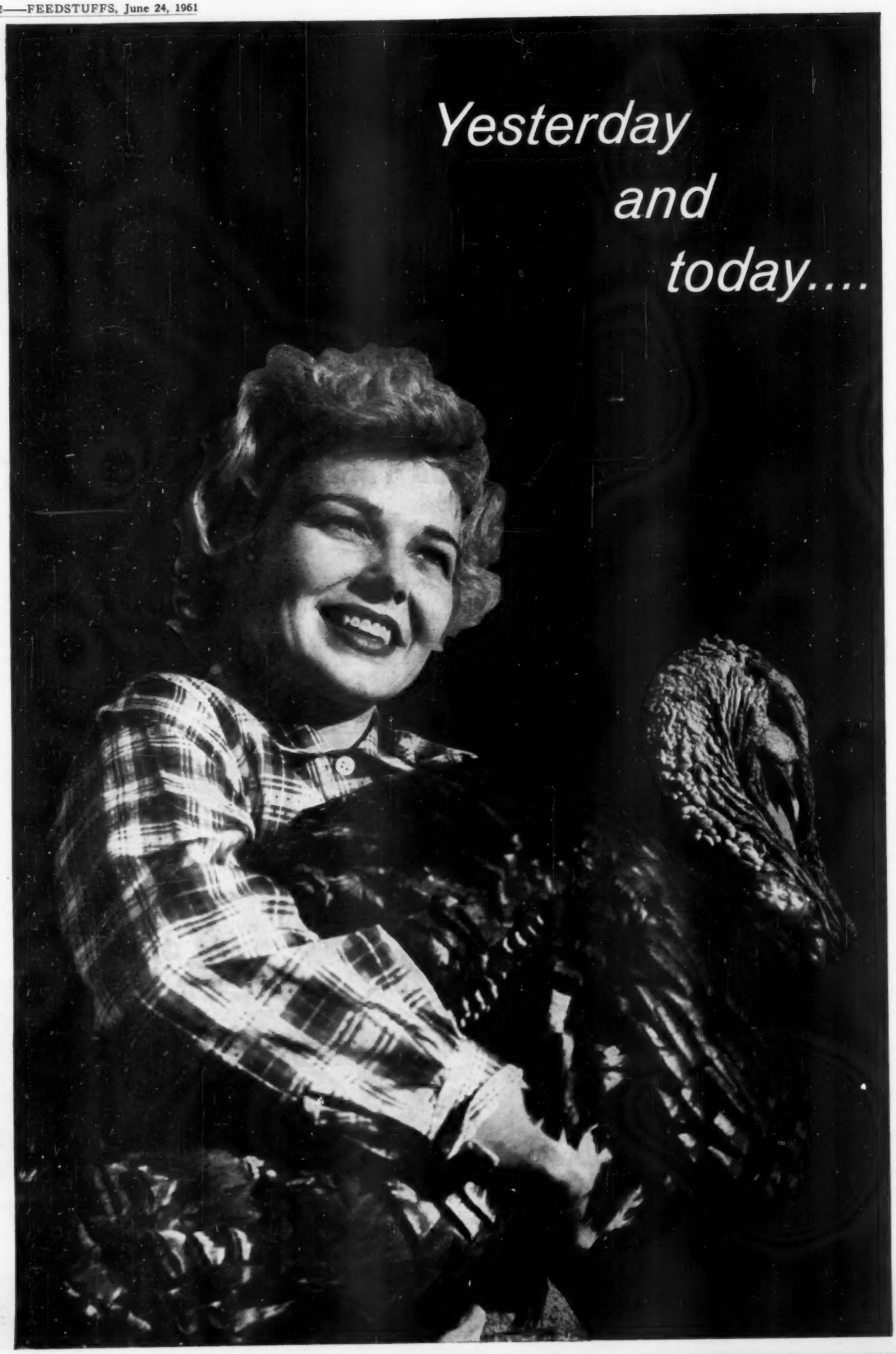
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS


Yesterday
and
today....

Histostat®-50 still prevents blackhead best

...and this year, many more millions of turkeys will be protected with this No. 1 blackhead preventive

Every year, for ten years now, more and more turkeys have been raised on feed containing Dr. Salsbury's Histostat-50. Why? Because growers have found that Histostat-50 consistently protects their flocks against mortality and weight loss from blackhead. That's reason enough, because this kind of disease prevention is their best assurance of strong, healthy birds, the kind that are necessary to profit. In addition, test after test at experiment stations have given similar results: *Histostat-50 prevents blackhead best.* So encourage growers not to take chances with turkey profits. Mix Histostat-50 in all rations for turkeys on range and advise that it be fed continuously. Growers may need to feed Histostat-50 earlier, if they've had trouble with blackhead in the brooder house. Remember—growers can't make money on dead birds.

Histostat-50 is widely advertised

Because of sustained advertising and promotion, your customers know of Histostat-50's superior blackhead protection. That's why it is steadily growing in popularity. Make sure your turkey feeds can measure up—mix Histostat-50 in rations for range birds. Write, wire, or phone for Feed Manufacturers Guide. Or, ask for a Dr. Salsbury's representative to call personally and talk with you about Histostat-50, the feed additive that is the nation's No. 1 blackhead preventive!

Dr. SALSBURY'S LABORATORIES
Charles City Iowa, U.S.A.

MORE THAN PRODUCTS—A SYMBOL OF SERVICE

UNIONIZATION AMONG BROILER GROWERS DIES

GARRISON, TEXAS — The organized labor movement among east Texas broiler growers seems to have died a natural death. For several months there was a concentrated movement by organized labor to unionize the growers, and many of them were hopeful that it would bring about better conditions.

"It expired because of its own weaknesses," says one observer. "When these people say that it could not and did not improve conditions, they just decided to stop paying the monthly dues."

The union officials had set up an office here as a center of operations, but when the membership dwindled to almost the zero figure, they decided to close up the office.

For the past year there has been no noticeable activity at all.

fic manager at Buffalo since 1956, is now assigned to ingredient purchasing.

Mr. Wetzel has been with the cooperative since 1936 in a variety of responsibilities.

Thomas Callahan, an assistant in the traffic department for the past seven years, becomes manager of the department. His association with the cooperative dates back to 1949.

BEMIS ANNOUNCES PERSONNEL CHANGES—R. P. Perry, manager of the Bemis Bro. Bag Co.'s Minneapolis plant and sales division, has been appointed to the company's newly-created position of director of product development, Judson Bemis, president, announced.

Mr. Perry's new assignment is a staff position in which he will report directly to the Bemis president. He will maintain headquarters in Minneapolis.

Mr. Perry has been manager of the Minneapolis plant and sales division of Bemis since March, 1958. He joined Bemis in 1946.

R. P. Perry D. A. Clarke

Mr. Perry will be succeeded in the Minneapolis managership by Dexter A. Clarke, manager of the Bemis plant and sales division in Indianapolis. Mr. Clarke joined the company in 1938.

K. W. Koechig will succeed Mr. Clarke as Indianapolis manager. He has been assistant to the manager there since April, 1959.

Amprolium-Antibiotic Combinations Cleared

WASHINGTON — The Food and Drug Administration has announced the clearance of combinations of certain antibiotics with the coccidiostat amprolium.

FDA amended food additive and antibiotic regulations to clear use of amprolium with bacitracin for growth promotion in chicken and turkey feeds and with chlortetracycline and a penicillin-streptomycin combination for prevention or treatment of diseases of chickens.

The FDA action was on data submitted in a petition filed by Merck & Co., Inc., Rahway, N.J., and other relevant material.

Amprolium previously had been cleared for use with penicillin and/or streptomycin at growth-promoting levels.

FDA said that it had cleared, for use with amprolium, from 4 to 50 gm. of bacitracin per ton of finished feed. This includes feed grade bacitracin, bacitracin methylene disalicylate, feed grade zinc bacitracin or feed grade manganese bacitracin.

Cleared for prevention or treatment of diseases of chickens were: From 50 to 100 gm. of chlortetracycline per ton of finished feed for prevention of certain infections; from 100 to 200 gm. of chlortetracycline for treatment of certain infections; a combination of 75 gm. of streptomycin and 15 gm. of penicillin per ton of finished feed for treatment of certain infections.

Zinc Bacitracin with Coccidiostats Cleared

NEW YORK — Growth levels of zinc bacitracin have been cleared by the Food and Drug Administration for use with the coccidiostats zoalene and amprolium in poultry feeds, it was pointed out in an announcement by I. Roy Cohen, sales manager, animal nutrition department, Commercial Solvents Corp.

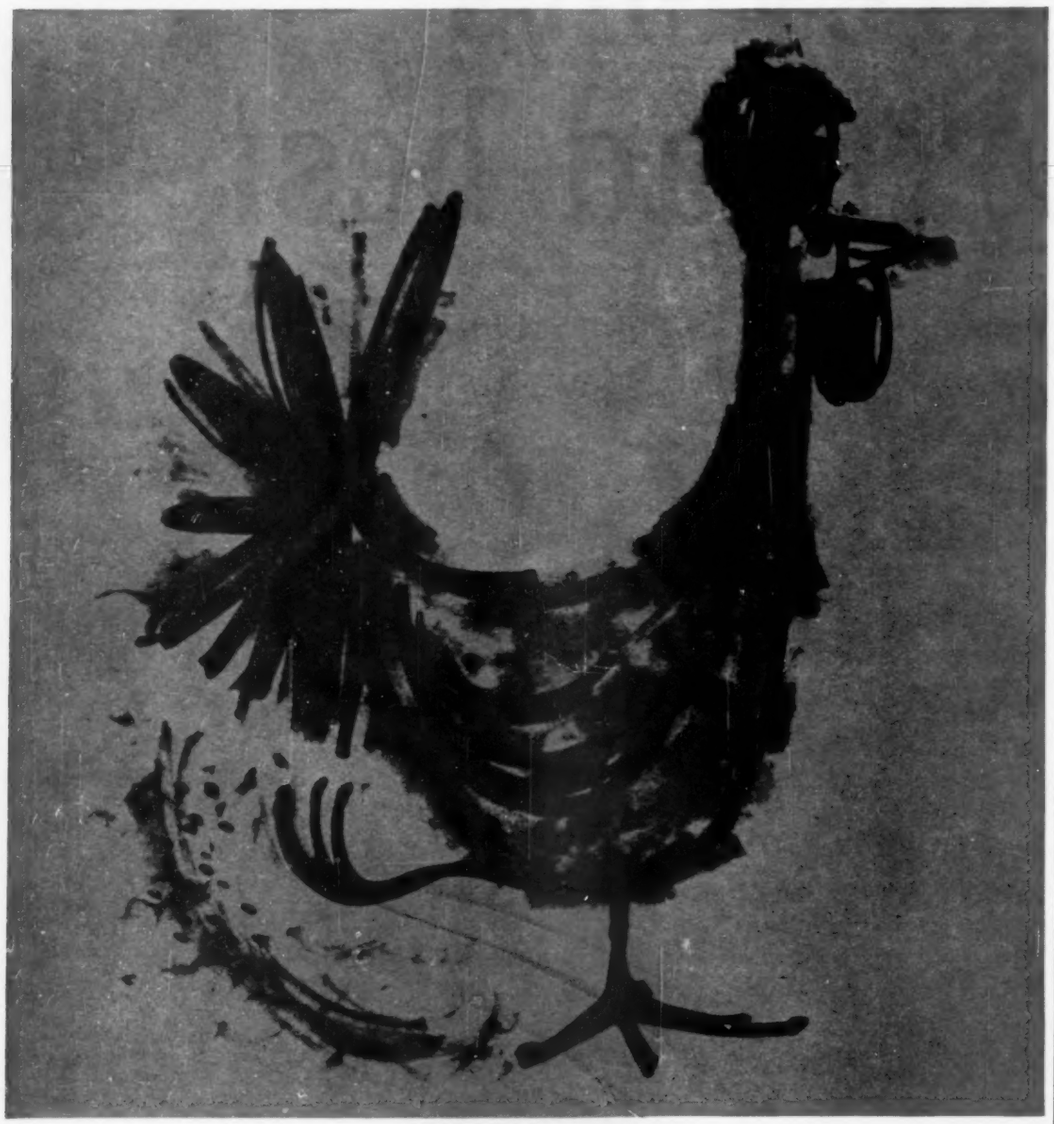
Mr. Cohen said that feed manufacturers having an approved Form 10 for penicillin with those coccidiostats may obtain supplemental clearance for zinc bacitracin by writing to FDA.

The growth levels now cleared range from 4 gm. to 50 gm. zinc bacitracin per ton of poultry feed with these new coccidiostats.

Asks Use of Tylosin In Water for Swine

WASHINGTON — The Food and Drug Administration announces that a food additive petition has been filed for the use of the antibiotic tylosin in drinking water for swine. The petition was filed by Corn States Laboratories, Inc., Omaha.

FDA previously cleared use of this antibiotic in feed for swine.



TIME AFTER TIME

You will find that the quality of your feed stays at a uniformly high level, lot after lot, when you use Hooker dicalcium phosphate. This because Hooker quality-controls its product from start to finish.

Phosphorus content is 18.50% min., calcium content ranges from 24.00% min. to 27.00% max., and fluorine content never exceeds 0.05%. You'll also like the optimum feed ratio you get from the high biological availability.

The consistent quality of Hooker feed supplements means that your fixed formulas stay fixed—and on-time delivery means that you never have to worry over production schedules.

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APPRAISALS

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SPECIAL PROBLEMS

Buy and Sell through WANT ADS -In- FEEDSTUFFS

Zoalene-Bacitracin Combination Cleared

WASHINGTON — The Food and Drug Administration has announced the amendment of food additive and antibiotic regulations to permit use of the antibiotic bacitracin in combination with the coccidiostat zoalene.

The action came on data submitted in a petition by The Dow Chemical Co., Midland, Mich., and other relevant material.

The FDA action cleared use of bacitracin with zoalene as an aid in stimulating growth and improving the feed efficiency of growing chickens. FDA previously had cleared use of penicillin at levels ranging from 2.4 gm. to 50 gm. per ton in combination with the Dow coccidiostat.

The order specified that bacitracin (as feed grade bacitracin, bacitracin methylene disalicylate, feed grade zinc bacitracin or feed grade manganese bacitracin) may be used at levels from 4 gm. to 50 gm. per ton of finished feed.

The regulations also specify labeling and other requirements for feeds and intermediate feeds or premixes containing the drugs.

Farm Bill Protest Events Held in Texas

FT. WORTH, TEXAS—A series of six meetings protesting the omnibus farm bill before Congress were held in Texas under sponsorship of the West Texas Chamber of Commerce.

The Texas Farm Bureau and Texas Grain & Feed Assn. had representatives at the fifth of the series of meetings held here at the Worth Hotel. Fred Husbands, executive vice president of the West Texas Chamber of Commerce, a 132-county organization, said his group does not want any legislation which reads as the farm bill does and cautioned allowing senators and congressmen to assume that people in Texas would be satisfied with such legislation.

Millard Shivers of the Texas Farm Bureau was one of the speakers. "If agriculture comes under complete control of the secretary of agriculture, as the bill would allow if passed as it is, complete control of business wouldn't be far behind," he said.

Warren LeBourveau of Mathis, president of the Texas Grain & Feed Assn., stated, "No less than 76 times does the bill refer to such phrases as 'discretion of the secretary' and 'as the secretary may prescribe' and it would be a real tragedy if Congress gave up its right to legislate; if this bill should pass, one part of our national business would lose its right to be heard except with a mere yes or no."

Ray B. Bowden, secretary-treasurer of the Texas Grain & Feed Assn., Ft. Worth, said that a majority of the members and officers of the association firmly protest "farm legislation centered virtually within the authority of one individual. We do not assume that the secretary would abuse this tremendous grant of power, but we say it would be an improper power to put into the hands of one man, unless we abandon our theory of government."

Broker Installs WATS

LITTLE ROCK, ARK.—The W. R. Wilson Co., Little Rock grain broker, has announced installation of the first Wide Area Telephone Service (WATS) from the Southwestern Bell Telephone Co.

Under this system, the firm receives bulk rate, straight line, long distance calling arrangements that are said to be more economical than message long distance or private line service.

The firm specializes in selling feed grains to Arkansas feed manufacturers, as well as sales of Arkansas grown soybeans and wheat for export.

Poultryman to Retire

UNIVERSITY PARK, PA.—Harry H. Kauffman, chairman of extension poultry husbandry at Pennsylvania State University, will retire July 1 after more than 35 yeafs of service. He will have emeritus rank, according to the university announcement.

WINS MORE CUSTOMERS
. . . MORE REPEAT SALES!

NEW
NECTARIZED
CALF-PAB

When Dairymen smell new NECTARIZED Blatchford's Calf-Pab's delicious aroma, they want to buy it. When they see how their calves go for its extra smackin' good milk flavor—they come back for more! Their calves eat better, grow better. Low cost . . . proved high quality . . . Calf-Pab gives you a high mark-up profit.

Write for Free Nectarized Display Now!

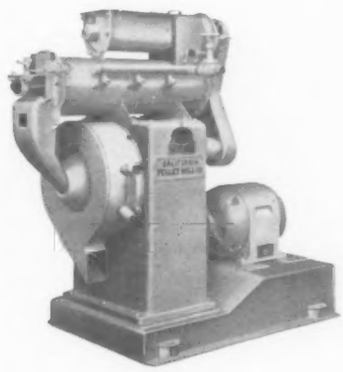
Blatchford's
ESTABLISHED IN 1900

Main Plant and Offices: Waukegan, Illinois
Midwest Plant: Des Moines, Iowa
West Coast Division: Nampa, Idaho

"The Name You Can Trust in Specialty Feeds"

MEMO TO THE SMALLER FEED MANUFACTURER

IF YOU'RE THINKING ABOUT A SINGLE, SMALL PRODUCTION UNIT, ECONOMICAL TO INSTALL AND OPERATE, THE CPM MASTER MODEL PELLET MILL FOR UNDER $4,200* MAY BE JUST YOUR SIZE



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UP OR DOWN

By Dr. Leonard W. Schruben, Agricultural Economist, Kansas State College

Down Pressure on Cattle Prices

Cattle prices in Chicago are down $4 cwt. from the peak in January. This is quite a drop. It doesn't make your cattle feeding customers feel like expanding in a big way either. They are looking for results. If you can show them the way to increased profits (or smaller losses) you will find a friend.

You can see in Figure 1 how the price pattern shapes up so far this year compared to last. The peak came earlier, the downslide has been at about the same rate but reaching lower levels than a year earlier.

Weekly prices have been used to chart the Chicago market. You find the month at the bottom of the chart and read up to the corresponding price. The solid line shows 1960 prices and the broken line is 1961.

Will prices recover? It's hard to forecast cattle prices and be correct. But cattlemen have a pretty strong seasonal trend working for them. Not that this will offset entirely the down push, but it will help.

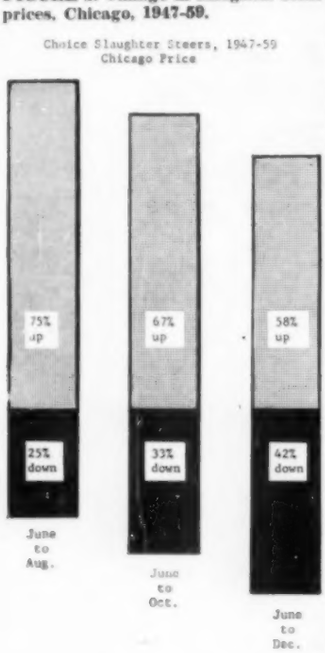
Direction of price changes since June from 1947 is indicated in Figure 2. This figure has been prepared to show you the percent of times prices have gone up, stayed the same, or gone down from June to the following August, to October and to December.

Here is how to read Figure 2: The top part of the first bar indicates the percent of times the monthly average Chicago price of choice slaughter steers went up from June to August since 1947. Within this bar is a 75. This means that 75% of the years from 1947 prices advanced from mid-June to mid-August.

The middle part of the bar, where there is one, indicates the percentage of years prices remained the same from June to the months as indicated. The bottom part of the bar shows the percentage of the years prices went down from June.

Here is how K-State economists size up the situation for finished cattle. It is expected that prices will be steady to slightly weaker through the summer. So odds favor anything nearing market weight being moved out. Some strengthening in late summer can be expected after the 5% larger number on feed in April has been moved out. Of course, much depends on how cattle come off the range this fall.

FIGURE 2. Change in slaughter steer prices, Chicago, 1947-59.

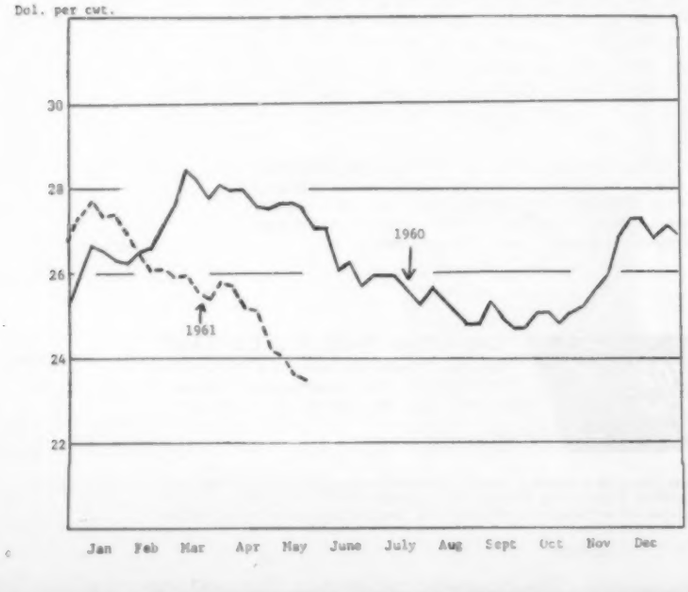


Turkey Men Honored

JASPER, IND. — Three hundred turkey growers attended an appreciation meeting for turkey growers of the Dubois County, Ind., area held here recently. Following a turkey dinner, Dr. Jack Tumlin and G. Richard Childs of Central Soya's feed research department discussed range management for turkeys.

The annual event was sponsored by six area Master Mix dealers: Dubois Elevator Co., Dubois; Haysville Mill, Inc., Haysville; Loogootee Feeders Supply Co., Loogootee; Haskins Feed Mill, Odon; Muller Milling Co., Ferdinand, and Twin City Feed Mill, French Lick, according to an announcement from the Master Mix Feed division of Central Soya.

FIGURE 1. Prices of choice slaughter steers, Chicago, 1960 to date.



NBC PROMOTION SERVICE—Clancy Adamy (right), executive vice president of the National Association of Feed Chains, previews the National Broiler Council's new seasonal sales promotion service with NBC's Frank Frazier. The new retailer advertising service, which was mailed recently to more than 3,000 food store executives, provides chain store operators with a host of editorial material to help advertisers and merchandisers to more effectively promote broiler-fryers. The promotion package includes a full-color, seven-page brochure outlining the new NBC service, four-color mats for advertising and direct mail programs, and regular black and white mats, plus other advertising aids.

International Outlines Canadian Mill Plans

MONTREAL — Robin Hood Flour Mills, Ltd., Canadian affiliate of International Milling Co., Minneapolis, has announced that the recently acquired feed mixing plant at Magog, Quebec, will operate as a Supersweet Mix dealership under the name of "Orford Grain, division of Robin Hood Flour Mills, Ltd." (Feedstuffs, June 10.)

The Magog firm, formerly operated by Grains Orford, Ltd., has been producing feeds under the name of "Orford," and has been acting as a dealer, servicing the trade within a 30 mile radius of Magog. Services will continue uninterrupted from Magog.

Sales will be handled by a well known feed dealer in the area. Edmond Rioux will devote full time as sales manager of the new operation. Mr. Rioux has, for many years, operated a dealership at Eastman, Quebec. His Eastman customers will be served from Magog.

Camille Boire has been appointed plant and office manager at Magog, operating under Dr. G. E. McKimpson of Montreal, who is director of nutrition and technical services.

The Magog operation joins Robin Hood's expanding feed business. In Canada, Robin Hood has two formula feed plants—one at Montreal, and the other at Milton, Ont.—plus one overseas plant at Guayaquil, Ecuador.

Grain Will Return to Rails if Rates Lowered

STOCKTON, CAL. — If the railroads will roll back freight rates on grain and grain products, the grain business will return to the railroads, believe members of the board of directors of the Stockton Grain Exchange.

In a recent meeting, the board registered objection to the proposal of the Pacific South Coast Freight Bureau which would "virtually eliminate transit privileges" and provide "piecemeal reductions," according to the board. The present transit privileges should be retained "without additional penalty," the board recommends, and the grain men are "utterly confused" by the fact that the freight bureau would "accord a loadable allowance in some cases and deny it in others."

Trucks cannot meet all the phases of transit of grain, it advised, and "without transit (or transit with a penalty attached)" puts railroads in a poor competitive position with trucks, according to the board.

Feed Mill to Be Presented; Fund Donors Listed

DAVIS, CAL. — A new $135,000 feed mill will be presented to the University of California at the university's Feeders Day, to be held July 12 at Davis. The presentation of the mill, now being completed, will be one of the highlights of the meeting, expected to attract some 500 feeders, producers and representatives of the feed and allied industries.

Because of the purposely exact specifications and the experimental nature of the mill, the cost is said to be high. None of the funds for the mill have come from the university itself. Contributions from interested feedlot and industry people are making the mill possible.

The California Cattle Feeders Assn. has handled the fund drive, and has been joined in by the California Hay, Grain & Feed Dealers Assn.

Many feeding pens must still be built, and the necessary funds are still short of the goal, officials said. Additional contributions are sought from persons and firms in addition to those listed below.

Contributions, which are tax deductible, may be sent in any amount to: George Tucker, manager-secretary, California Cattle Feeders Assn., 972 S. Goodrich Blvd., Los Angeles 22, Cal., or to Dr. James Meyer, chairman, department of animal husbandry, University of California, Davis.

A booklet listing names of individuals and companies who have contributed to the feed mill fund will be distributed at the mill presentation ceremonies on July 12.

The latest report listed the following donors to the University of California feed mill fund (cities in California unless otherwise indicated):

David S. Adams, Adams, Schwab & Adams, Woodland; D. E. Alexander, Napa; Donald H. Armstrong, Rio Vista; Donald Barkley, Barkley Farms, Arvin; Garrett Beckley, Beckley Commercial Feed Yard, Linden; Robert Beechinor, Beechinor Cattle Feeding Co., Bakersfield; Al Benton, Roy F. Benton Feed Yard, Walnut.

California Cattle Feeders Assn., Los Angeles; California Cattle Supply Co., Carl McKenzie, Bellflower; California Cotton Oil Corp., Los Angeles; Camp & Mebane Cattle Co., Shafter; Carnation Co., Los Angeles; C-M Ranch, Paul Glud, Calexico; Colt Cattle Co., Fred W. Canning, Jr., Mendota; Colpien Feed Yards, Inc., Tulare; Consolidated Milling Co., San Francisco; Peter Cook, Jr., Rio Vista; V. K. Corfman, El Centro; Glen W. Cornelius & Son, Solvang; Cutter Laboratories, Berkeley.

Dawe's Laboratories, Chicago; Dewey Donnell, Sonoma; Dixon (Cal.) Dryer Co., Jerry Fielder; Joe B. Finley, Sr., Callaghan Ranch, Encinal, Texas; Archie Frick, Sycamore Farm, Arvin; Frederick Frick, Fredio Farms, Arvin; Will Gill & Sons, Madera; F. J. Gunterman, Gunterman Ranches, Calexico; John H. Guthrie, Slough Ranch, Porterville; Hartman & Williams, Calexico; Holly Sugar Corp., Colorado Springs, Colo.; The Irvine Co., C. S. Wheeler, Tustin.

Jeffery Milling Co., Winters; Kern County Land Co., Charles Quarre, Bakersfield; La Hacienda Co., J. B. Van Nuys, Los Angeles; Machlin Feed Yards, Walnut; Lewis Mangels, Suisun; Marks Meat Co., W. S. Marks, and Woodland Feed Yards, Woodland; McCabe Cattle Co., El Centro; Harvey McDougal, McDougal Livestock Co., Birds Landing; Keith Mets, K Lazy M Ranches, Holtville; Minch's Wholesale Meats, Red Bluff; John Montgomery, Montgomery Ranch, Simi.

Newhall Land & Farming Co., Bruce Berrington, Saugus; Louis E. Nohl, Nohl Land & Cattle Co., Olive; Charles O'Brien, O & B Cattle Co., Gonzales; Orita Land & Cattle Co., E. C. Rutherford, Brawley; Pacific Coast Renderers Assn., Nels A. Hamberg, Emeryville; Pacific Molasses Co., James W. Ferguson, San Francisco; W. H. Patterson, Woodland.

Porter Estate Co., Carl L. Garrison, San Francisco; Producers Livestock Marketing Assn., North Salt Lake, Utah; Marcus Rudnick, Rudnick Trust Feed Yard, Bakersfield; Hubbard Russell, Maricopa; Semi Tropic Cattle Co., Shafter; C. J. Shannon, C. J. Shannon & Sons, Tulare; Sinton & Brown Co., Santa Maria; Snow & Co., South Pasadena; Spreckels Sugar Co., San Francisco.

Tejon Ranch Co., L. H. Rochford, Bakersfield; Tooby Bros., Arthur Tooby, Eureka; Tooby & Prior, Inc., Arthur Tooby, Eureka; George N. Tucker, San Gabriel; Union Feed Yards, Blythe; Vail Co., Los Angeles; Vita Pacific Laboratories, C. K. Funs, Hayward; Wilbur-Ellis Co., San Francisco; H. C. Williams, Williams & Son, Whittier; Donald S. Compton & Son, Herald; Tom Craven, Sanger; Joseph M. Urrutia, Friant; S. A. Camp Ginning Co., Shafter.

A. L. Gilbert Co., Oakdale; Oakdale (Cal.) Commercial Feed Yards; Berry Seed & Feed Co., Keyes; Mill Engineering & Machinery Co., Oakland; California Pellet Mill Co., San Francisco; Jake L. Schneider, Schneider Ranch, Sloughhouse; James P. Sprigg Co., Los Angeles; Walter S. Markham, Salinas.

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The field trials reported on the following pages compared Taomyxin with other antibiotics or other drugs commonly used alone, or in combinations of two or more drugs.

For these trials, a regular, high-quality swine feed was used. Taomyxin was added to part of the feed . . . other antibiotics or drugs to the rest . . . and the performance of the different rations was compared.

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Whether you're in the dog food manufacturing business or have considered putting your label on a dog food, the new Dog Food Ingredient Spec Sheets published by Ralph WELLS & Co. are "must" reading. Each 8½ x 11" sheet covers in detail one of the seven major dog food ingredients manufactured by WELLS; provides full size, full color product photos . . . ingredients features . . . guaranteed and average analyses . . . ingredient breakdown . . . and shipping container data. These spec sheets set standards by which to judge the quality of all your dog food ingredient purchases. They're *FREE* . . . just write to

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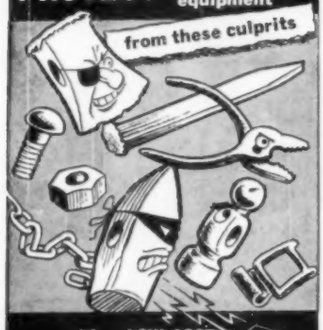

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5-Point Plan Meets Challenge Of Changes in Trade Conditions

By Al P. Nelson
Feedstuffs Special Writer

In the face of shifting trade conditions, including processing and marketing, business ways are changing. In a new competitive era, what can a feed mill owner or operator do to meet the challenge of the times?

This is a question which has managers of small as well as large feed plants investigating avenues for new revenue and also for cost-cutting techniques.

Erwin D. Scott, manager of O. L. Barr Grain Co., Inc., Bicknell, Ind., has a five-point program and is doing a very fine job of meeting the needs of customers. Mr. Scott, a former president of the Indiana Grain & Feed Assn., has profited from the information he has received through this association and its members on trade problems and solutions. Added to his own experience, this information helped him fashion the following program:

1. Plant modernization to provide efficient and quick service.
2. Grain bank plan which helps beat the farm-mixing idea.
3. Feed buying incentive plan for customers based on tonnage.
4. Consistent direct mail campaign.
5. Sales promotion, including part-time salesman.

Plant Modernized

About three years ago, Barr Grain's management realized that in order to give customers the type of service wanted, it would have to modernize the firm's feed plant. The company contracted with U. E. Fitzpatrick & Co., Burket, Ind., to build a new bulk feed plant with a storage space of 125 tons. The firm has had a 200% increase in feed business, it was indicated.

The new bulk receiving and distributing system includes 10 concentrate holding tanks in addition to a bulk feed load-out station with four 6-ton storage bins.

The feed and grain firm facilities include new under-the-track unloading machinery. A reversible auger is used to unload feed from bulk rail cars into the mill to be put into storage. This operation takes about 1½ hours to unload a 30-ton car. The auger is reversed to unload feed from storage bins or distributed elsewhere.

"We can also empty out mixers into the 90 ft. elevator leg via an auger on top and go to either side of the mill," says Mr. Scott.

The remodeled mill has two mixers, a new 2-ton Kelly Duplex and an older 1-ton type. The hammermill is a 50 h.p. Jay Bee.

A Wayne feed dealer for over 30 years, this firm has a 6-ton Bulkmaster truck which is kept busy hauling feed to hog, cattle and poultry farmers in the trade area. The firm has a minimum charge for delivering up to 3 tons of feed and an additional charge of $1 ton after that. Two men are employed in the mill and warehouse. Additional employees are in other departments of the business.

"As you can see by the large increase in our feed volume, this modernization program and the increased efficiency are solving a big problem," says Mr. Scott.

Barr Grain has a grain bank plan, which is the answer to mixing operations on the farm, according to Mr. Scott. The firm dries grain bank corn to 12½% moisture, using a large Butler bin for drying purposes. There is no charge for drying grain, but there is a 1% shrink charge per month. This grain bank operation is well liked by many farmers.

"Farmers hate to scoop grain," he says, "and that's one reason why they take advantage of our grain bank plan."

Discount Program

In December, 1960, Barr initiated a special program to reward customers for large tonnages of feeds purchased from the firm. This plan totals a customer's feed purchases for one year and then allows him certain discounts according to the volume purchased, if his account is current. Thus far, the plan is well received by farmers.

Since important agricultural news is popping almost every day, Mr. Scott believes that as a feed dealer it is his duty and to his advantage to get such authoritative findings to his customers and prospects regularly. He has subscribed to an agricultural report for 12 years at a cost of $14 per month. He mails this report to 400 farmers once a month. The bulk mail rate is 2½¢ per letter, he states, and it takes a stenographer one day's time to handle the mailing. Sometimes, Mr. Scott also slips in another piece of direct mail at the 2½¢ postage rate.

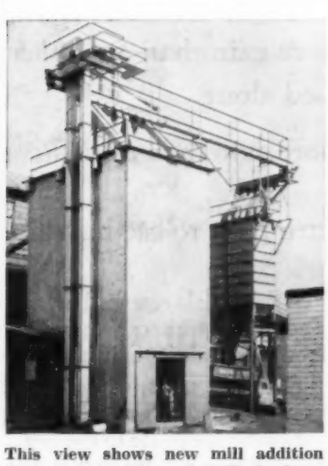
This monthly report is well liked by the farmers and they have faith in it. "This is an educational deal that is paying off for us in better informed customers," he reports.

This is Erwin D. Scott, manager of O. L. Barr Grain Co., Inc., Bicknell, Ind. He has developed a five-point program to satisfy the demands of changing feed trade conditions.

Sales Promotion

Another point in Mr. Scott's program is new sales promotion and also outside selling. He has hired a part-time outside salesman to visit feeders and discuss their feed problems with them.

With an active, five-point program like this, the O. L. Barr Grain Co., Inc., is meeting the needs of numerous farmers. "We are constantly surveying our trade area to be sure we spot all the problems farmers encounter that we can help them with," says Mr. Scott. "We have to keep pace with the farmer and his needs if we are going to maintain and even increase the rate of gain we are getting through our modernization program and other ideas."



This view shows new mill addition (left foreground) and bulk load-out station (right background) of Barr Grain. Running up side of new mill addition is elevator leg which connects under-the-track rail car unloading facilities to storage bins and distributing system.

New receiving and distributing system now operated by O. L. Barr Grain Co., Inc., Bicknell, Ind., includes this bulk feed load-out station which has four 6-ton storage bins.

April Feed Use Under March, Above Year Ago

WASHINGTON—Commercial feedstuffs consumption of 1.6 million tons during April was 125,000 tons under March consumption but about 60,000 tons more than was recorded in the same month a year earlier, the U.S. Department of Agriculture reports.

Consumption for the first seven months, October through April, totaled 12.4 million tons, a gain of almost 500,000 tons over the same period last season. Exports, mainly oilseed meals, for the first seven months totaled 442,600 tons as against 653,100 tons for the same period last year. Imports were about the same as last season.

Oilseed meal consumption of 7.5 million tons, October through April, was 465,000 tons more than the same months of 1959-60. Most of the increase was in soybean meal with disappearance this season at 5.4 million tons—386,000 tons above 1959-60. Domestic feeding of cottonseed meal increased slightly, with smaller exports offsetting decreased production. Consumption of other oilseed meals was moderately above last year. Stocks of oilseed meals at the end of April totaled 518,900 tons this year as against 371,700 tons last year.

Feeding of grain by-product feeds the first seven months of the season totaled about 4 million tons—a drop of around 50,000 tons. Output of all these feeds, except rice millfeed, was down slightly. Consumption of wheat millfeeds was down 20,000 tons, while gluten feed and meal shipments were 42,000 tons less than last year. Increased imports of fish meal offset the smaller domestic production with consumption the first seven months up slightly from a year ago. Feeding of alfalfa meal since the first of October totalled 762,700 tons this year as against 694,900 tons last year.

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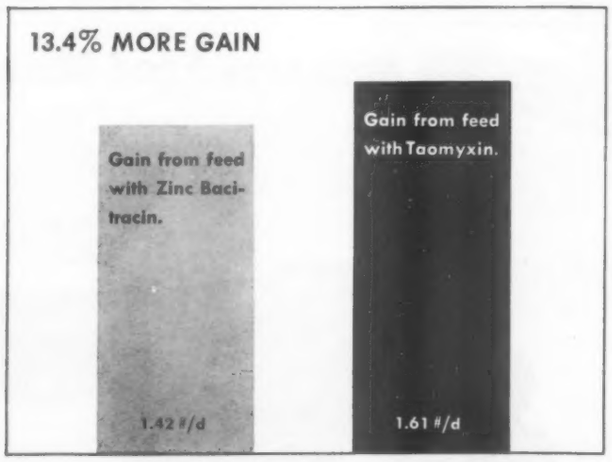

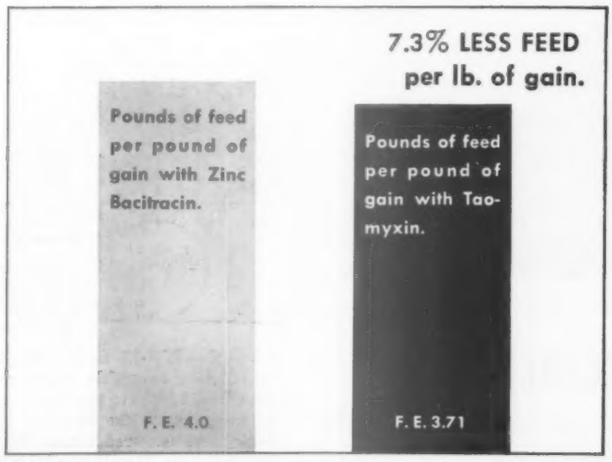
7.3% LESS FEED per lb. of gain.
Pounds of feed per pound of gain with Zinc Bacitracin.
F. E. 4.0
Pounds of feed per pound of gain with Taomyxin.
F. E. 3.71

Taomyxin produced 19 lbs. more gain per day per 100 pigs . . . on 29 lbs. less feed per 100 lbs. gain.

For additional information on the above trials, write for "Synopsis of University Research and Field Trials on Taomyxin" from Chas. Pfizer & Co., Inc., Agricultural Division, 235 East 42nd St., New York 17, N. Y.

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The AC's are similar to standard Cleveland Vibrators, except that the piston stroke is cushioned by a pocket of air. While noise is not eliminated, it is reduced to an unobjectionable level.

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Convention Calendar

June 28 and 30—"Golden Goodness of Texas High Quality Eggs" Month; June 28, Kickoff Luncheon, Texas State Hotel, Houston; June 30, Kickoff Luncheon, Baker Hotel, Dallas; T. A. Hensarling, sec., Texas Egg Council, P.O. Box 251, Stephenville, Texas.

June 29-30—Pennsylvania Poultry Federation; Pennsylvania State University, University Park; (room reservations) Russell Murphy; (program information) Glen O. Bressler, Room 105, Weaver Hall.

July 7-8—Maine Broiler Festival; Belfast, Maine.

July 12—California Feeders Day; University of California, Davis; chm., Dr. G. P. Lofgreen, Animal Husbandry Dept.

July 14-18—Georgia Feed Assn.; Grand Bahama Club, Grand Bahama Island; sec., W. E. Merritt, Suite 1-A, 361 E. Paces Ferry Rd. N.E., Atlanta 5.

July 18-20—American Poultry Congress & Exposition; Municipal Auditorium, Minneapolis; Don M. Turnbull, sec., American Poultry & Hatchery Federation, 521 E. 63rd St., Kansas City 10, Mo.

July 24-28—Southeastern Egg Quality and Grading School; Auburn University, Auburn, Ala.; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

July 27—Technical Alfalfa Conference; co-sponsored by the American Dehydrators Assn. and USDA Western Utilization Research and Development Division; Western Regional Research Laboratory, USDA, Albany, Cal.; chm., Dr. G. O. Kohler, Chief, Division Field Crops Laboratory, Western Regional Research Laboratory, 800 Buchanan St., Albany 10.

Aug. 2-4—West Virginia Poultry Assn. Convention and Festival; Moorefield, W.Va., sec., Wilson Smith, Petersburg.

Aug. 3-4—National Soybean Processors Assn.; Edgewater Beach Hotel, Chicago, Ill.; sec., Wm. K. Self, 3818 Board of Trade Bldg., Chicago 4, Ill.

Aug. 7-9—Southeastern Management Roundtable; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Aug. 7-12—Texas Feed Microscopy Short Course; Memorial Student Center, Texas A&M College, College Station; E. E. Brown, Station Microscopist.

Aug. 8-9—Wisconsin Nutrition School; Memorial Union, University of Wisconsin, Madison; Dr. Robert Grummer, Animal Husbandry Dept.

Aug. 9—Science at Work, Open House and Reports by Staff Scientists; Connecticut Experiment Station, Lockwood Farm, Mt. Carmel, Conn.

Aug. 13-18—School of Executive Development in Business Management, Unit II; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Aug. 18—Ohio Swine Day; Ohio State University, Columbus.

Aug. 20-22—National Hay Assn.; Phoenix Hotel, Lexington, Ky.; sec., Mrs. Elgene L. Hicks, 900 E. Bridge St., Plainwell, Mich.

Aug. 21—Illinois State Turkey Growers Assn.; Willis Clark farm, U.S. Hwy. 150, Mahomet, Ill.; sec., S. B. Swann, Kauffman Turkey Farms, Waterman, Ill.

Aug. 21-22—Kentucky Feed & Grain Association; Brown-Suburban Hotel, Louisville, Ky.; sec., Jack Weber, Box 425, Lexington.

Aug. 24-26—North Carolina Feed Manufacturers Assn.; Cavalier Hotel, Virginia Beach, Va.; sec., McNair Evans, Box 428, Laurinburg, N.C.

Aug. 24-27—Georgia Poultry Institute; Rock Eagle 4-H Club Center, Eatonton, Ga.; Dewey McNiece, Extension Poultry Dept., University of Georgia, Athens.

Aug. 28-29—American Soybean Assn.; Claypool Hotel, Indianapolis, Ind.; Geo. M. Strayer, Hudson, Iowa.

Aug. 30—"Golden Goodness of Virginia Fresh Eggs Month" Kickoff Dinner; John Marshall Hotel, Richmond, Va.; J. Paul Williams, sec., Virginia Egg Council, 615 E. Franklin St., Richmond.

Sept. 11-12—Minnesota Nutrition Conference; Institute of Agriculture, University of Minnesota, St. Paul;

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

July 12—North Dakota Turkey Day; North Dakota State University, Fargo; sec., Irving J. Mork, Box 2408, North Dakota Turkey Federation, State University Station, Fargo.

July 12-13—Poultrymen's Get-Together; Cornell University, Ithaca, N.Y.

Aug. 11—Specific Pathogen-Free Swine Conference; Center for Continuing Education, University of Nebaska, Lincoln; Louis Welch, Specific Pathogen-Free Swine Coordinator, University of Nebraska.

Sept. 21-23—Arkansas Feed Manufacturers Assn.; Mountain Inn, Fayetteville; sec., J. W. Cobb, Box 391, North Little Rock.

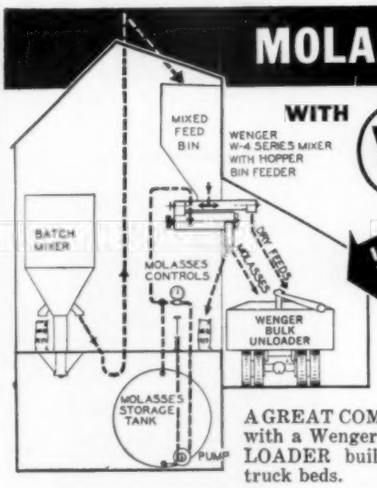
Nov. 9-10—National Swine Industry Conference; Statler-Hilton Hotel, St. Louis, Mo.; chm., Keith Myers, Grundy Center, Iowa.

Nov. 17-18—Tennessee Feed Manufacturers Assn.; Chisca Downtown Motel, Memphis, Tenn.; sec., C. H. Warfield, 200 American Trust Bldg., Nashville, Tenn.

1962

March 15-16—Oregon Feed & Seed Dealers Assn.; Sheraton Hotel, Portland; sec., Russ Hays, Lewis Bldg., Portland 4.

MOLASSES MEAL FEEDS IN BULK



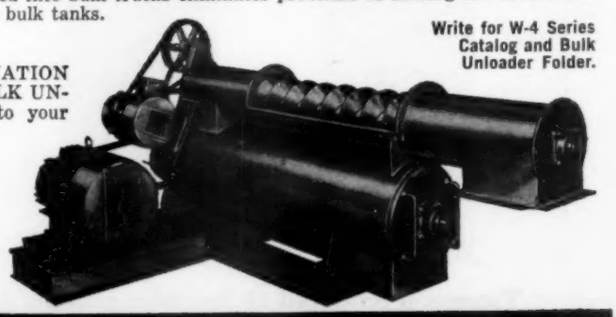
WITH Wenger W-4-72 SERIES Molasses Feed Mixer

INSTALLED OVER YOUR DRIVEWAY

Apply molasses to meal feeds as feeds are loaded into bulk trucks, or convey back inside of feed mill for molasses feeds to be delivered in bags. Application of molasses just as feeds are delivered into bulk trucks eliminates problems of storing molasses feeds in bulk tanks.

Write for W-4 Series Catalog and Bulk Unloader Folder.

A GREAT COMBINATION with a Wenger BULK UNLOADER built into your truck beds.



ABOVE—W-4-72 Series Hopper Bin model with reversible feeder may deliver mixed feeds to the molasses mixer, or into bulk trucks directly for those feeds to be delivered in meal form without molasses. Models available from 3 tons to 40 tons per hour.

Wenger Mixer Manufacturing
SABETHA, KANSAS
PHONE AVenue 4-2133

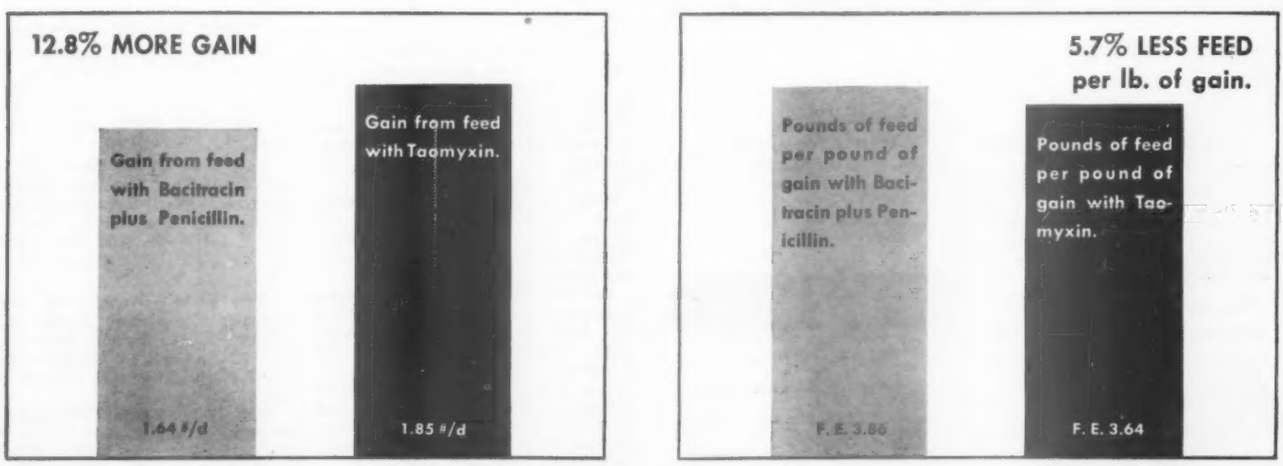
Standard of the Industry for Liquid Feed Mixing, Pelleting and Cooling Equipment.

taOmyxin

Pfizer

Brand of oleandomycin and oxytetracycline TM

produces more gains at less cost than Bacitracin plus Penicillin


12.8% MORE GAIN
Gain from feed with Bacitracin plus Penicillin.
1.64 #/d
Gain from feed with Taomyxin.
1.85 #/d
5.7% LESS FEED per lb. of gain.
Pounds of feed per pound of gain with Bacitracin plus Penicillin.
F. E. 3.86
Pounds of feed per pound of gain with Taomyxin.
F. E. 3.64

Taomyxin produced 21 lbs. more gain per day per 100 pigs . . . on 22 lbs. less feed per 100 lbs. gain.

For additional information on the above trials, write for "Synopsis of University Research and Field Trials on Taomyxin" from Chas. Pfizer & Co., Inc., Agricultural Division, 235 East 42nd St., New York 17, N. Y.

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- Minerals & Vitamins
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BLENDS DRY MATERIALS with LIQUID ADDITIVES
- Molasses
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Please Send Me Literature on Marion
Mixing Equipment _____ lb. capacity
NAME _____
ADDRESS _____
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CALENDAR FOR 1961-62

JUNE

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chm., Dr. L. E. Hanson, Animal Husbandry Dept.

Sept. 11-13—Feed Production School; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 13-14—Maryland Feed Service Conference; Chemistry Auditorium, University of Maryland, College Park; Wade H. Rice, Poultry Dept.

Sept. 14 — Small Mill Workshop; Continental Hotel, Kansas City, Mo.; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 17-19—Northwest Retail Feed Assn.; Hotel Pick-Nicollet, Minneapolis, Minn.; sec., W. D. Flemming, Grain Exchange Bldg., Minneapolis 15.

Sept. 18-19 — Pet Food Institute; Drake Hotel, Chicago, Ill.; sec., Clyde Kassens, 333 N. Michigan Ave., Chicago 1.

Sept. 19 - 21 — Marketing Seminar for Feed Manufacturers; Morrison Hotel, Chicago; Sales Executives Council, American Feed Manufacturers Assn.; W. E. Glennon, president, 53 W. Jackson Blvd., Chicago.

Sept. 19-27—International Conference on Fish in Nutrition; Washington, D.C.; sec., Dr. Erik Heen, Chief, Fisheries Technology Branch, Food and Agriculture Organization, Washington 25.

Sept. 20-21—American Feed Manufacturers Assn. Marketing Seminar; Morrison Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago.

Sept. 22-23—Iowa Feed Conference; Memorial Union, Iowa State University, Ames; Dr. H. L. Self, Animal Husbandry Dept.

Sept. 22-23 — Iowa Feed Conference; Memorial Union, Iowa State University, Ames; chm., Dr. C. E. Summers, Animal Husbandry Dept.

Sept. 24-26—Southeastern Feed Production School; Continuing Education Center, University of Georgia, Athens.; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 Ponce de Leon Ave., Decatur, Ga.

Sept. 27-29—National Feed Ingredients Assn.; Lake Lawn Lodge, Delavan, Wis.; sec., I. Levin, 517½ E. Locust St., Des Moines 9, Iowa.

Sept. 27-29—Pennsylvania Millers & Feed Dealers Assn.; Hotel Hershey, Hershey, Pa., sec., D. W. Parke, P.O. Box 329, Ephrata, Pa.

Sept. 28-29 — Arkansas Formula Feed Conference; University of Arkansas, Fayetteville; Dr. E. L. Stephenson, animal industry and veterinary science department.

Oct. 2-3—Washington Poultrymen's Institute; Centralia Junior College; Dr. Leo Jensen, Poultry Science Dept., Washington State University, Pullman.

Oct. 3-5—Northeastern Poultry Producers Council Exposition and Convention; Farm Show Bldg., Harrisburg, Pa.; sec., Richard I. Ammon, 10 Rutgers Place, Trenton 8, N.J.

Oct. 4-6—Texas Nutrition Conference; Texas A&M College, College Station; chm., Dr. J. R. Couch, Poultry Science Dept.

Oct. 8-10—Poultry Industries of Louisiana; Bellemont Motor Hotel, Baton Rouge, La.; sec., Stella Jones, Poultry Industry Dept., Louisiana State University, Baton Rouge.

Oct. 10-11—Iowa Poultry Convention; Veteran Memorial Auditorium, Des Moines; sec., Iowa Poultry Assn., LeRoy Kruskop, 535 E. Lincoln Way, Ames, Iowa.

Oct. 15-20—School of Executive Development in Business Management, Unit III; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 Ponce de Leon Ave., Decatur, Ga.

Oct. 16-17—California Animal Industry Conference; Fresno Memorial Auditorium, Fresno, Cal.; co-sponsored by California Hay, Grain & Feed Dealers Assn. and University of California; sec., California Hay, Grain & Feed Dealers Assn., Leo L. Johnson, Blue Anchor Bldg., 1400 10th St., Sacramento, Cal.

Oct. 23-25 — Centennial Nutrition Conference; Hotel Muehlebach, Kansas City 5, Mo.; sponsored by Midwest Feed Manufacturers Assn. and Land-Grant Colleges in Midwest's area; executive vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Oct. 24-25—Virginia State Poultry Federation; Hotel John Marshall, Richmond, Va.; sec., J. Paul Williams, 615 E. Franklin St., Richmond 19.

Oct. 24-25—Indiana State Poultry Assn.; Hotel Severin, Indianapolis; sec., Robert L. Hogue, Poultry Science Bldg., Purdue University, Lafayette.

Oct. 26-28—Association of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., Bruce Poundstone, Head, Feed and Fertilizer Control Dept., University of Kentucky, Lexington.

Nov. 1—Animal Nutrition Research Council; Shoreham Hotel, Washington, D.C.; sec., Dr. Philip Derse, Wisconsin Alumni Research Foundation, 506 Walnut St., Madison 5, Wis.

Nov. 1-2—Kansas Poultry Assn.; Broadview Hotel, Wichita; sec., Harry J. Reed, Box 663, Manhattan.

Nov. 1-3—Cornell Nutrition Conference; Statler Hilton Hotel, Buffalo, N.Y.; chm., Prof. Douglas E. Hogue, Animal Husbandry Dept., Wing Hall, Cornell University, Ithaca, N.Y.

Nov. 8-9—Illinois Feed Assn.-Illinois Poultry and Hatchery Federation joint convention; Springfield Armory, Springfield; sec. I.F.A., Dean M. Clark, 141 W. Jackson Blvd., Chicago 4; sec., I.P.H.F., Aubrey Harless, Shelbyville, Ill.

Nov. 13-14 — Washington Animal Industry Conference; Skagit Valley College, Mount Vernon, Wash.; John G. Wilson, mgr., Washington State Feed Assn., Inc., 814 Second Ave. Bldg., Seattle 4.

Nov. 16-19—Florida Nutrition Conference; Grand Bahama Hotel, West End, Grand Bahama Island; chm., Dr. J. P. Feaster, Animal Husbandry and Nutrition Dept., University of Florida, Gainesville.

Dec. 6-7—Missouri Poultry and American Poultry & Hatchery Federation Midwest Quickie Convention; Hotel Continental, Kansas City, Mo.; sec., Missouri Poultry Improvement

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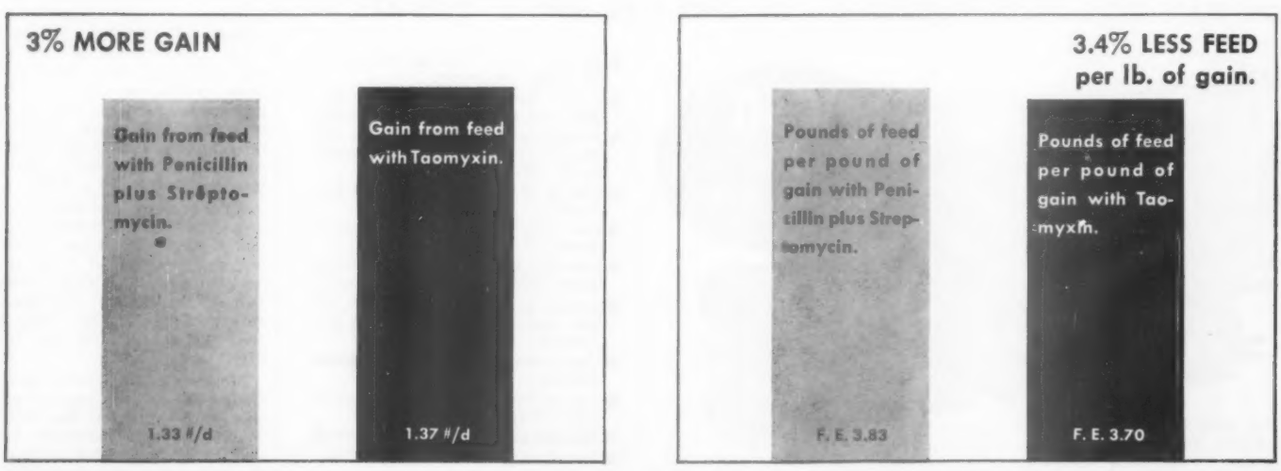
Pfizer

Brand of oleandomycin and oxytetracycline TM

produces more gains at less cost than Penicillin plus Streptomycin


3% MORE GAIN
Gain from feed with Penicillin plus Streptomycin.
1.33 #/d
Gain from feed with Taomyxin.
1.37 #/d
3.4% LESS FEED per lb. of gain.
Pounds of feed per pound of gain with Penicillin plus Streptomycin.
F. E. 3.83
Pounds of feed per pound of gain with Taomyxin.
F. E. 3.70

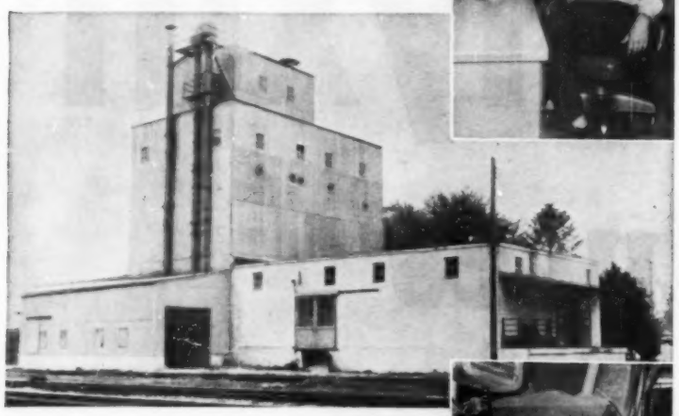
Taomyxin produced 4 lbs. more gain per day per 100 pigs . . . on 13 lbs. less feed per 100 lbs. gain.

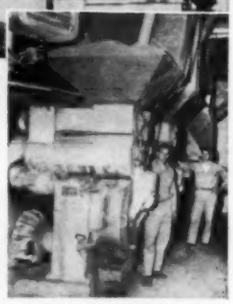
For additional information on the above trials, write for "Synopsis of University Research and Field Trials on Taomyxin" from Chas. Pfizer & Co., Inc., Agricultural Division, 235 East 42nd St., New York 17, N. Y.

Capacity doubled for Heinold...

no increase in man hours of labor!

Virgil Heinold, Manager of Heinold Elevator Co., Kouts, Indiana gives Fitzpatrick credit for this record of efficiency over two year period.





Two 75 h.p. pellet mills are supplied by an 80 ton holding unit. A 120 ton bin for sacking feeds doubles as a holding unit from which mash can be transferred to the pellet mill lines for night runs.

Burned out in early 1958, Heinold Elevator called in Fitzpatrick to engineer and erect a new plant, designed to handle future expansion. The Fitzpatrick design has proved itself in productive efficiency and labor economy.

Ingredient storage of 300 tons is unloaded via a push-button batching arrangement geared to 20 tons of feed per hour. Equipment includes a fat and molasses system and a 150 ton bulk station housed under the same roof as the plant.

If you're considering mill modernization or expansion, it will pay you to talk with Fitzpatrick. Write for brochure!

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FEED MILL ENGINEERING. MANUFACTURE. ERECTION

U. E. FITZPATRICK & COMPANY, BURKET, INDIANA

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Assn., E. M. Funk, Box 568, Columbia, Mo.

Dec. 7-8—Michigan Feed and Grain Dealers Assn.; Pantland Hotel, Grand Rapids, Mich.; sec., Nevels Pearson, Box 472, East Lansing.

Dec. 7-8—North Carolina Animal Nutrition Conference; North Carolina State College, Raleigh; chm., Dr. G. H. Wise, Animal Nutrition Section, Animal Industry Dept.

1962

Jan. 21-23—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4.

Jan. 29-31—Southeastern Poultry & Egg Assn.; Municipal Auditorium, Atlanta, Ga.; sec., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Feb. 4-6—Wyoming Grain, Feed & Seed Dealers Assn.; Townsend Hotel, Casper, Wyo.; sec., Everett L. Berry, Box 118, Sheridan, Wyo.

Feb. 5-7—Association of Southern Agricultural Workers; Jacksonville, Fla.

Feb. 9-11—Poultry Fact Finding Conference; sponsored by Institute of American Poultry Industries; Municipal Auditorium, Kansas City, Mo.; pres., Harold M. Williams, 67 E. Madison, Chicago 2, Ill.

Feb. 14-15—Pacific Northwest Feed Mill Production School; Benjamin Franklin Hotel, Seattle; sponsored by Washington State Feed Assn.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 16—Washington State Feed Assn. annual convention; Benjamin Franklin Hotel, Seattle; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 20-21—Virginia State Feed Convention and Nutrition Conference; Hotel Roanoke, Roanoke, Va.; sec., Virginia State Feed Assn., J. Paul Williams, 615 E. Franklin St., Richmond 19, or Prof. Paul M. Reaves, Dairy Science Dept., Virginia Polytechnic Institute, Blacksburg.

Feb. 26-March 1—Colorado Livestock Days; Colorado State University, Fort Collins; chm., Dr. C. D. Story, head, Animal Science Dept.

March 19-21—Poultry and Egg National Board; Palmer House, Chicago, Ill.; mgr., Lloyd H. Geil, 8 S. Michigan Ave., Chicago 3.

March 21-23—Grain & Feed Dealers National Assn.; Denver-Hilton Hotel, Denver, Colo.; Secretaries Circle meetings March 19-20; sec., Herbert L. Sharp, 401 Folger Bldg., 725 - 15th St. N.W., Washington, D.C.

March 28—Commercial Egg Clinic; Texas A&M College, College Station; B. C. Wormeli, Extension Poultry Husbandman.

April 9-10—National Institute of Animal Agriculture; Purdue University, Lafayette, Ind.; sec., Karl D. Butler, P.O. Box 521, First National Bank Bldg., Ithaca, N.Y.

April 10-12—Animal Health Institute; Statler-Hilton Hotel, Washington, D.C.; sec., D. L. Bruner, 512 Shops Bldg., Des Moines 9, Iowa.

April 18—Nebraska Feeders Day; University of Nebraska, Lincoln; chm., Dr. Robert M. Koch, Animal Husbandry Dept.

April 26-28—Texas Grain & Feed Assn.; Hotel Texas, Ft. Worth; sec., R. B. Bowden, 504 Ft. Worth Club Bldg., Ft. Worth 2.

April 26-28—California Hay, Grain & Feed Dealers Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Leo L. Johnson, 1400 10th St., Sacramento 14, Cal.

April 26-28—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita, Kansas; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

May 10-12—American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 54.

Aug. 13-18—12th World's Poultry Congress; Show Grounds of the New South Wales Royal Agricultural Society, Sydney, Australia; Dr. Cliff D. Carpenter, chairman, U.S. Participation Committee, 1207 Emerald Bay, Laguna Beach, Cal.; Dr. A. William Jasper, secretary, c/o AFBF, 2300 Merchandise Mart, Chicago 54, Ill.

Rail Group to Peruse Rate Hearing Findings At Washington Meeting

WALTHAM, MASS.—The eastern railroads' Traffic Executives Assn. is scheduled to convene in Washington the last week of this month to give further consideration to rail rate adjustments asked at a Chicago hearing in May and at earlier hearings over the past two years. The group will hear from its research committee on what it has condensed from piles of testimony heard on rate proposals regarding grain and feed ingredient shipments from the Midwest to the East.

John Bressette, traffic manager, Wirthmore Feeds, Waltham, Mass., and chairman of the eastern feed manufacturers' transportation committee, said the traffic executives group is expected to decide whether rate changes are warranted and whether the proposals of eastern railroads should be given further study.

Representatives of the eastern feed manufacturers and the American Feed Manufacturers Assn. have opposed the eastern railroads' joint rate adjustment proposal principally because it would raise the rate on manufactured feed railed out from mills from ½¢ to 6¢ over the incoming grain rate. Among other things, the proposal also would increase the minimum carload weight from 40,000 to 50,000 lb., both for grain coming into and feed leaving mills.

Mr. Bressette said the eastern feed group and AFMA want a "complete and orderly rate reduction on grain and grain products." This reduction, he said, should include "milling in transit," continuing the same grain rate charged into the mills on the feed that is railed out from the mills after processing.

Meanwhile, the Traffic Executives Committee of the eastern railroads has approved a modified version of Maine Central Railroad's rate reduction plan on Midwest corn, but the actual rate change is still a long way off, and it's possible that it will be delayed indefinitely. Approval given to the Maine Central rate proposal is subject to revision under the Interstate Commerce Act, Mr. Bressette explained.

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YOU CAN AXLE MORE PAYLOAD — DRIVERS LIKE SIMPLE OPERATION

- Capacities from 5 tons and up in single or tandem axle models.
- Closed, heavy-duty hydraulic drive system means years of trouble-free service.
- Unloads hard-to-handle feeds up to 800 lbs. per minute — Easy-to-handle grains up to 1,500 lbs. per minute.
- Built of 12 ga. steel — All welded construction.
- Free "360 degree" swinging auger — reaches 21 ft. bin.
- Individual hydraulic drive on each auger makes clearing any jammed auger easier.
- Variable speed, hydraulically driven bottom auger reduces pellet crushing to a minimum.
- Special compartment door design reduces bridging.
- Two or more compartments — Tarp or steel top optional.
- Catwalks and ladder standard equipment.
- Pit unloading with bottom auger only.

WRITE, WIRE OR PHONE COLLECT for further information about the Simonsen V-50 series of bulk feed bodies, PLUS a full line of other bulk feed bodies, combination bulk and sack bodies, unloaders to fit your present truck box, bulk fertilizer spreaders, and the NEW Simonsen Feedilizer, a bulk feed and bulk fertilizer body.

S SIMONSEN MANUFACTURING CO.

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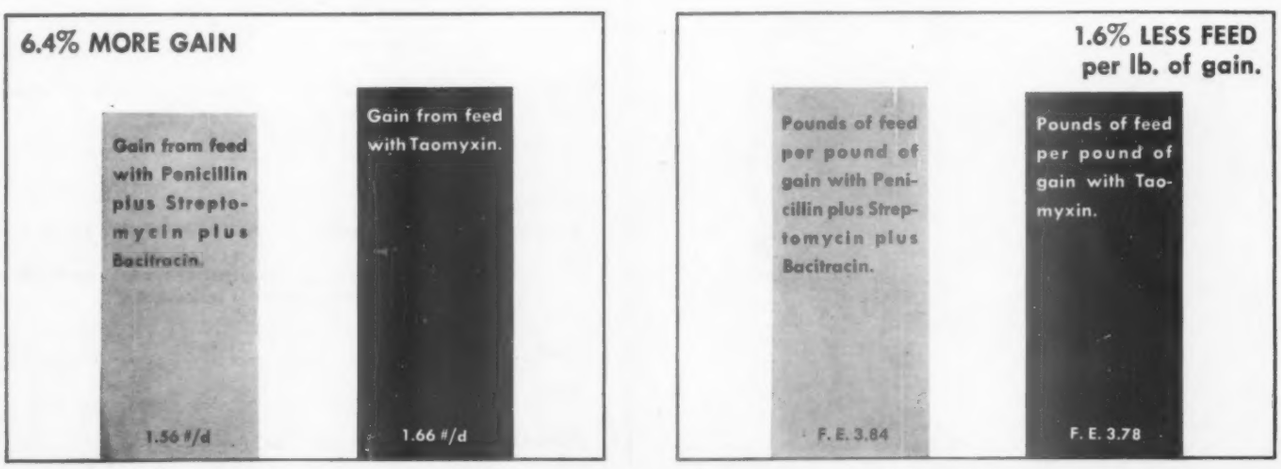
taOmyxin

Pfizer

Brand of oleandomycin and oxytetracycline TM

produces more gains at less cost than Penicillin plus Streptomycin plus Bacitracin


6.4% MORE GAIN
Gain from feed with Penicillin plus Streptomycin plus Bacitracin.
1.56 #/d
Gain from feed with Taomyxin.
1.66 #/d
1.6% LESS FEED per lb. of gain.
Pounds of feed per pound of gain with Penicillin plus Streptomycin plus Bacitracin.
F. E. 3.84
Pounds of feed per pound of gain with Taomyxin.
F. E. 3.78

Taomyxin produced 10 lbs. more gain per day per 100 pigs . . . on 6 lbs. less feed per 100 lbs. gain.

For additional information on the above trials, write for "Synopsis of University Research and Field Trials on Taomyxin" from Chas. Pfizer & Co., Inc., Agricultural Division, 235 East 42nd St., New York 17, N. Y.

Mobile Mill Panel Members Say Operation Profit Builder

By RUSSELL TOKHEIM
Feedstuffs Staff

CEDAR RAPIDS, IOWA—Operation of a mobile milling unit can be a profit builder for a feed dealer through its own operation as well as through increased sales of concentrates.

That was the conclusion of a three member panel discussion group on portable milling at the Kent Feeds Grinding and Mixing Seminar held here recently. Over 300 feed dealers and guests attended the annual event sponsored by Kent Feeds, Inc., Muscatine, Iowa, for its dealers.

Serving as moderator for this panel discussion was Willard J. Wilson, district manager for Kent. Panel members were: Ray Curtis of Kent substituting for Elmer Prahm, Slayton Mobile Feed Service, Slayton, Minn.; Lloyd Kroeger, Kroeger's Feed Store, Teeds Grove, Iowa, and Jerry Stence, Jerry's Feed & Livestock, Garnavillo, Iowa.

Asked the question **"Has your portable mill been profitable?,"** the three dealers replied as follows:

Prahm: Yes. The two machines we operate are bringing in $450 per week from grinding and mixing alone.

Kroeger: Definitely. The machine paid for itself in four years and, in addition, has returned a nice profit.

Stence: Without any question. It increased our feed sales 30% and enabled us to get more customers through service.

Has the portable mill increased your sales of Kent concentrates?

Prahm: Definitely. Our sales of Kent have increased about 90%.

Kroeger: Without any question. Our sales of Kent concentrates have increased about 500 tons a year in the past two years. Last year we hit 1,200 tons and we're shooting for more this year.

Stence: Yes, 30%.

Mr. Prahm has been in the mobile milling business for 23 years and has two units—one Daffin and one Gehl 20 ft. with mixer and molasses. Mr. Kroeger has been in the portable milling service for five years and also operates a Daffin unit. Mr. Stence has a Daffin unit and has been providing the service for three years.

All three men indicated that they have a molasses mixer in connection with their portable mills. And, all three have 4,000 gal. molasses storage tanks.

The next question they were asked was:

Do you feel that the molasses mixer has been beneficial to your business?

Prahm: Yes, we use about 4,000 gal. every 60 days and molasses is a very good profit item.

Kroeger: Yes, I fill a lot of silos in the fall and add molasses. We also use it in lamb, hog and dairy rations. The profit margin on molasses is good.

Stence: Yes. We use a lot of molasses in dairy rations.

Do you use bulk concentrates?

Prahm: No.

Kroeger: No.

Stence: No.

What percentage of your total portable mill business is for dairy cattle, beef cattle, hogs and poultry?

Prahm: Twenty-five per cent for hogs, 40% for beef cattle, 25% for poultry and 10% for dairy cattle.

Kroeger: Eighty per cent for hogs, 10% for dairy cattle and 10% for poultry. We mix very little cattle feed, although we do use the mill to add molasses to silage when the silos are being filled for cattle feeding.

Stence: Forty per cent for dairy, 40% for hogs, 5% for beef cattle and 15% for poultry.

All three dealers have mills equipped with grinding equipment. Mr. Prahm's grinding capacity is six tons per hour. Mr. Kroeger's capacity is 1,800 bu. per day or six batches of 3,000 lb. each hour at one place. Mr. Stence said his grinding capacity is 2,800 lb. in 20 min. All three also have hay grinding equipment. Capacities given were: Mr. Prahm, 15,000 lb. and Mr. Stence, 3,400 lb. Mr. Kroeger said that what little grinding his unit does is for sow rations.

What are your regular charges for grinding and mixing services?

Prahm: Three dollars per ton or $4.50 per batch (3,000 lb.).

Kroeger: Five dollars per batch of 3,000 lb. If they will add 200 lb. of molasses, we will grind and mix for $4.50 per batch.

Stence: $5.50 for fine grind and $4.50 for coarse grind.

None of the three dealers charge more for their grinding and mixing service if the farmer supplies his own concentrates.

The questioning then turned to operation of the unit with the following questions asked and answers given:

Does severe weather (snow, rain, etc.) interfere with your operations much?

Prahm: No.

Kroeger: Yes.

Stence: A little.

If so, estimate how much time is lost because of bad roads, etc.

Kroeger: It depends on the year. A year ago, the road right in front of our store was embargoed for six

(Turn to MOBILE MILL, page 70)

PORTABLE MILLING PANEL—Shown here are members of the portable milling panel at the Kent Feeds Grinding and Mixing Seminar held recently in Cedar Rapids, Iowa. At the left is W. F. Schafenacker, vice president and sales manager of Kent, who served as master of ceremonies. Members of the panel are, left to right: W. J. Wilson, district manager for Kent and panel moderator; Jerry Stence, Jerry's Feed & Livestock, Garnavillo, Iowa; Ray Curtis, Kent territory manager, Worthington, Minn., who substituted for Elmer Prahm, Slayton Mobile Feed Service, Slayton, Minn., and Lloyd Kroeger, Kroeger's Feed Store, Teeds Grove, Iowa.

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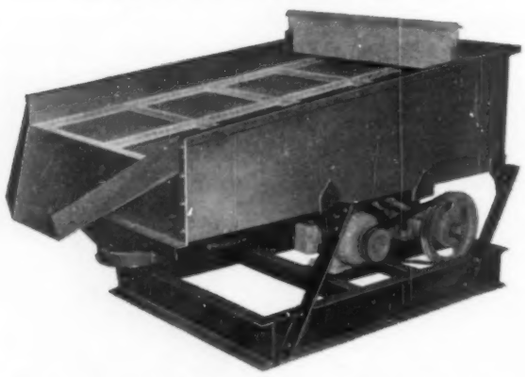

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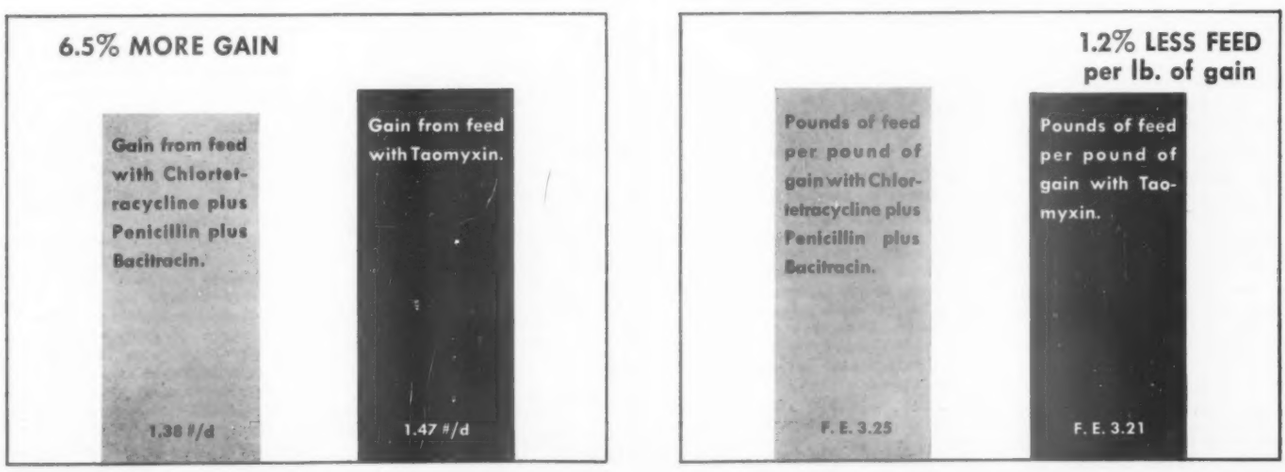

6.5% MORE GAIN
Gain from feed with Chlortetracycline plus Penicillin plus Bacitracin.
1.38 #/d
Gain from feed with Taomyxin.
1.47 #/d
1.2% LESS FEED per lb. of gain
Pounds of feed per pound of gain with Chlortetracycline plus Penicillin plus Bacitracin.
F. E. 3.25
Pounds of feed per pound of gain with Taomyxin.
F. E. 3.21

Taomyxin produced 9 lbs. more gain per day per 100 pigs . . . on 4 lbs. less feed per 100 lbs. of gain.

For additional information on the above trials, write for "Synopsis of University Research and Field Trials on Taomyxin" from Chas. Pfizer & Co., Inc., Agricultural Division, 235 East 42nd St., New York 17, N. Y.

NITRATE POISONING In Livestock

By Dr. O. E. Kolari and Dr. R. M. Jordan
University of Minnesota

Results of Studies Reviewed Here Indicate That:

- **Animals vary as to the point where nitrate level becomes lethal.**
- **Cattle appear to be the most susceptible to nitrate poisoning.**
- **The minimal lethal dose appears to be lower when poor quality hay is fed.**
- **Feeding high-energy feeds increases the tolerance of animals to nitrate.**
- **Supplemental protein may also assist in raising the tolerance to nitrate.**
- **The slower animals eat high-nitrate feeds the better their ability to "detoxify" nitrate.**
- **Livestock losses are usually related to drouth conditions or lowland pastures.**
- **Rumen microorganisms can convert nitrate to ammonia. The ammonia may then be incorporated into microbial protein in the rumen.**
- **Excess nitrate intake may cause methemoglobinemia.**
- **Treatment of acute cases of nitrate poisoning should not be delayed.**
- **Vitamin A deficiency has been related to high dietary nitrate.**
- **Well, or other water, high in nitrate may be toxic.**
- **Silage juices from ensiled high nitrate forage may be toxic.**
- **Silage fermentation reduces the initial nitrate content of ensiled forage.**
- **Feeds suspected of high nitrate should be chemically analyzed and the feeding program should be adjusted according to the nitrate content of the feeds.**

Nitrate poisoning or oat hay poisoning in livestock has been recognized for years. For example, Kansas reports (Mayo, 1895) indicate that cattle fed cornstalks grown on land previously used as a hog lot were toxic. The corn had grown well early in the season, but drouth stunted it in July. Crystals of potassium nitrate (KNO_3) were apparent in the stalks and chemical analysis indicated 18.8% KNO_3 on a dry matter basis. South Dakota (Olson and Moxon, 1942) reported greatest losses from oat hay poisoning occur from consuming oat hay after a spring rain or thaw.

Forages from most farm grain crops, such as oats, wheat, barley and sorghums, pasture grasses and numerous weeds can concentrate nitrate under certain conditions.

SYMPTOMS OF NITRATE POISONING — Accelerated respiration and pulse rate, diarrhea, frequent urination, depressed appetite, general weakness, trembling, staggering gait, frothing from the mouth and a blue color of mucous membranes, muzzle, tongue and udder are symptoms of nitrate poisoning. Animals usually die within 4.5 to 9 hours after eating lethal levels of nitrate.

Methemoglobinemia — Brown-colored blood is characteristic of cattle suffering from nitrate poisoning and actually may be the best single diagnostic tool. The brownish color of the blood is due to the formation of methemoglobin.

Normally, the iron of the blood hemoglobin is in the ferrous state to facilitate transport of oxygen to various tissues of the body. In this form hemoglobin picks up oxygen in a chemically loose combination and releases oxygen to tissues readily. When nitrate is consumed it may be converted to nitrite in the rumen and be absorbed into the blood stream as such. The nitrite oxidizes the ferrous hemoglobin (oxyhemoglobin) to ferric hemoglobin (methemoglobin) which can not transport oxygen. The methemoglobin turns the blood brown in color. Death of affected animals occurs when about three fourths of the oxyhemoglobin has been converted to methemoglobin. Actually, death from nitrate poisoning may be compared to asphyxiation or strangulation of the animal.

NITRATE METABOLISM IN THE RUMEN—South Dakota (Olson ond Moxon, 1942) workers demonstrated that it was the nitrate in plants that caused the losses from feeding oat hay with a high nitrate content. They isolated an organism (Bacillus subtilis) from a weed (redroot) and incubated it with a small amount of hay and distilled water. They discovered that 40° C and a pH of 7 to 8 were optimum for the reduction of nitrate to nitrite. Below pH 6, nitrite accumulation was slow and below pH 5, nitrate reduction to nitrite did not occur. Under favorable conditions the formation of nitrite (NO_2) from nitrate (NO_3) increased rapidly after 5 to 6 hours' fermentation.

Their data suggest that conditions in the rumen are optimum for the reduction of nitrate when all-roughage rations are fed (rumen pH about 7.0 with all-roughage ration).

English Study

However, washed suspensions of rumen microorganisms were incubated by an English worker (Lewis, 1951a) to investigate nitrate metabolism in the rumen. He found the optimum pH for the reduction of nitrate and nitrite to ammonia was 6.3 and 5.6, respectively.

In another study, the English worker (Lewis, 1951b) placed varying amounts of sodium nitrate directly into the rumen of a rumen fistulated sheep fed 3.5 lb. meadow hay. His results showed that nitrate was converted to ammonia (NH_3) in the rumen by microorganisms and that nitrite was an intermediate in the reaction. Nitrite nitrogen and ammonia nitrogen levels in the rumen and methemoglobin values both increased sharply when they increased the dose of sodium nitrate from 12 to 25 gm.

He felt that when a certain concentration of nitrate in the feed was reached the rate of reduction of nitrite to ammonia was limited, thus causing nitrite to accumulate in the blood.

Evidence that it was nitrite and not nitrate that was the main killer was provided by Missouri workers (Pfander et al., 1957) who injected sheep with 2.8 gm. KNO_3 or 25 gm. KNO_3. Sheep injected with nitrite died within two hours whereas those injected with nitrate showed no undesirable symptoms. The injection of 90 gm. KNO_3 did produce dehydration, diuresis, a high concentration of KNO_3 in the blood but no methemoglobinemia. Since injection of nitrite produced symptoms of nitrate poisoning and nitrate did not they concluded that nitrate in the ingested feed must be reduced to nitrite by rumen flora and then absorbed into the blood stream to cause methemoglobinemia.

South African Sheep

South African studies (Shapiro, et al., 1949) with sheep showed that nitrate in ruminal ingesta disappeared more rapidly with a ration of alfalfa hay than of a poorer quality hay. Feeding glucose increased the rate of conversion of nitrate to nitrite and likewise the reduction of nitrite. When alfalfa hay and about two thirds pound corn were fed to sheep, 50 gm. KNO_3 were required to produce the same effect as 20 gm. fed with poor quality hay.

Dr. Olaf E. Kolari

AUTHOR — Dr. Kolari has gained recognition in beef cattle nutrition research since joining the animal husbandry staff at the University of Minnesota in 1957, the same year he received his doctor's degree with a major in animal husbandry and a minor in veterinary science.

A native Minnesotan, he graduated from the University of Minnesota with a B.S. degree in 1948 and was a high school vocational agriculture instructor until 1952 when he returned to the university for graduate study.

Dr. Jordan, co-author, is also a member of the University of Minnesota animal husbandry department.

This article was prepared by the authors as Paper No. 1071, Miscellaneous Journal Series of the Minnesota Agricultural Experiment Station.

The Missouri Station (Garner, 1958) noted that high energy rations offset milk production losses when dietary nitrate content was not over 0.85%. Molasses and corn have been used successfully as energy sources, but they must be fed with that portion of the ration containing nitrate. If nitrate is not reduced to nitrite in the rumen or if completely reduced to ammonia, then there is little danger from nitrate poisoning.

Nitrate poisoning is not as severe when forages containing high amounts of nitrate are consumed slowly. Experimental results in which nitrates are added as a drench or as a capsule or fed with grain may be expected to be different than when nitrates are consumed as a part of the total feed.

TOXIC LEVELS OF NITRATE—No single level of nitrate is toxic under all conditions. Cattle appear to be more susceptible than sheep, horses or hogs, but there appears to be a marked difference in tolerance between animals of the same species. Level of nitrate in the feed, kind of ration and speed of nitrate intake all have a definite bearing on toxicity.

Early Wyoming studies (Bradley et al., 1940) estimated the minimal lethal dose of KNO_3 at 25 gm. per 100 lb. liveweight. Thus, a 500 lb. animal eating 5.5 lb. (2,500 gm.) oat hay having 5% KNO_3 would in effect be eating 25 gm. KNO_3 per 100 lb. liveweight. The Wyoming researchers reported 2.2 to 7.3% KNO_3 in oat hay or straw had caused losses in cattle. Furthermore, they showed that cattle do not develop a tolerance to nitrate enabling them to safely consume larger amounts of nitrate later.

The Missouri Station (Garner, 1958) suggested maximum levels of KNO_3 on a dry matter basis and the expected animal response as follows:

Levels of KNO_3	Animal Response
0 –0.5%	Normal if on adequate rations.
0.6–1.0%	Milk production decreases, slowly at first, increases after 6th to 8th week. Typical vitamin A deficiency symptoms in 6 to 8 weeks.
1.0–1.5%	Milk production drops in 4 to 5 days. Reproductive difficulty over the period fed to several weeks after removal of feed.

Cornell workers (Crawford and Kennedy, 1960) sprayed sodium nitrate on hay at a rate to supply 45 gm. per 100 lb. liveweight. Fifty per cent of the total hemoglobin of the cattle was converted to methemoglobin. An antidote of methylene blue was necessary to prevent death of several animals. In other experiments they had shown that dairy cattle were near death when methemoglobin values were 50% or greater. They felt that 45 gm. of nitrate intake per 100 lb. of animal would probably result in death of about one half of the animals. When a ration adequate in energy and protein was fed, injury to cattle was reduced.

Wyoming scientists (Bradley et al., 1940) set the lower limit for potentially toxic hay at 1.5% KNO_3. In a more recent study, Gilbert (1946) cited reports of abortions in cattle occurring when feeds containing a range of 0-1.5% KNO_3 (average, 0.45%) were fed.

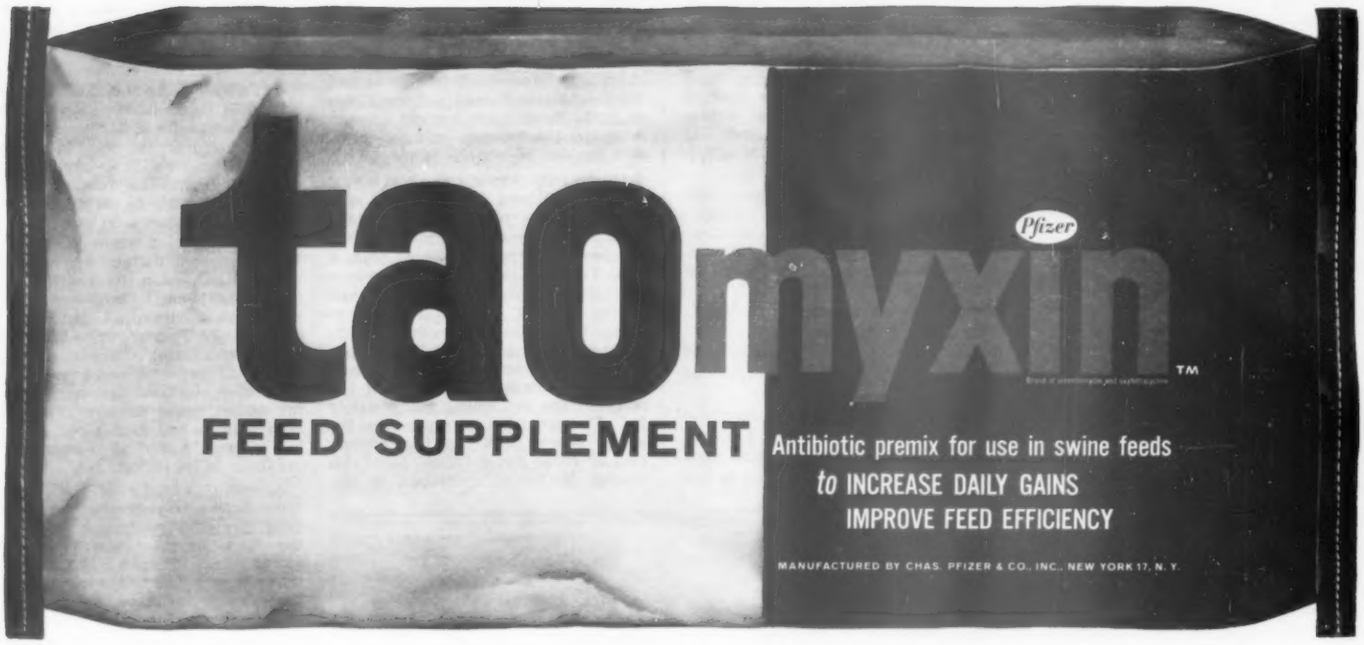
Missouri, Illinois Tests

In a Missouri experiment (Garner, 1958), dairy cattle fed 75 gm. KNO_3 (0.75%) and 125 gm. (1.25%) KNO_3 dropped in milk production. When 5% molasses was added to the ration, production returned to normal. Feeding 0.75% KNO_3 led to abortion in another trial and feeding 1.25% KNO_3 caused death within 3 weeks. Simon et al. (1959) fed 100 gm. KNO_3 to dairy cattle. This led to abortion and lesions of the fetal membrane. Another heifer fed 70 gm. KNO_3 for 47 days resulted in considerable methemoglobin formation, but did not cause abortion.

Illinois workers (Sokolowski et al., 1960) fed sheep a complete ration containing 12.8% KNO_3 without visible symptoms of nitrate toxicity. In other trials they reported that lambs fed only poor quality hay and 0.5 gm. KNO_3 per kg. bodyweight daily resulted in 75% methemoglobin on the third day of the trial. Lambs on pasture treated in a similar manner also showed severe symptoms of nitrate toxicity.

Illinois studies (Tollett et al., 1960) indicated that levels over 1.84% dietary nitrate depressed gains of pigs fed corn-soybean oil meal rations. Pregnant gilts fed nitrate had a reduced rate of growth but no differences in corpora lutea numbers, per cent implantation, ovary weight or thyroid weights were observed.

Beef cattle fed mountain meadow hay fertilized with 90 lb. of nitrogen per acre made slower weight gains than cattle fed unfertilized hay in a Colorado study (Perez and Story, 1960). They extracted hay that had been produced under heavy nitrogen fertilization and found that this extract inhibited gas production when incubated with rumen microorgan-



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isms (Hopkins et al., 1960). They concluded that the factor in the hay causing the decreased activity of rumen organisms was nitrate.

In addition to livestock losses from eating forages containing lethal levels of nitrate, cattle losses from drinking water having large amounts of nitrate (6,200 ppm) were cited in a Wyoming report (Gilbert et al., 1946). Whitehead and Moxon (1952) reported well water containing a range of 415 to 525 ppm of nitrate nitrogen toxic to cattle.

Grazing Livestock — Pregnant heifers were pastured on weedy lowland pasture with a history of noninfectious abortion in a Wisconsin study (Simon et al., 1959). They felt that a definite relationship existed between the nitrate content of weeds in lowland pastures and abortion in cattle grazing them. Weeds under certain conditions may have as much or more nitrate than cultivated crops.

Application of fertilizer was effective in reducing abortions by stimulating growth and development of bluegrass and other grasses by crowding out the weeds. Spraying the pasture with 2,4-D (for weed control) was also effective in controlling abortion. However, weeds sprayed with 2,4-D may retain their nitrate content and under certain conditions contain even higher amounts of nitrate shortly after spraying.

The Wisconsin workers were not able to correlate the time of abortion or predict impending abortion from methemoglobin measurements. Methemoglobin values varied among cattle on different days.

Missouri researchers (Garner et al., 1960) measured serum nitrate in relationship to nitrate toxicity and concluded that it was not a reliable diagnostic tool.

Cattle grazing heavily fertilized and manured sudan grass pastures containing 1.9% KNO_3 on a dry matter basis resulted in abortions in another Missouri experiment (Garner, 1958).

Swine pastured on a mixture of rape and oats containing 5.5% and 0.5% nitrate, respectively, resulted in abortion two weeks before term and the production of dead and weak pigs at birth. Tests showed a low vitamin A in the blood serum and an excessive amount of nitrate (Case, 1954).

ENSILING REDUCES NITRATE—South Dakota (Whitehead and Moxon, 1952) reported corn silage fermentation in which a pungent yellow-brown gas was produced from a silo. The corn apparently contained considerable nitrate when ensiled and during normal fermentatnon processes, the nitrate was reduced to gases containing nitrogen. Upon completion of fermentation the yellowed silage was removed from top of the silo and the remaining silage safely fed. Fermentation processes in the silage which result in the production of these gases (nitric oxide, nitrogen dioxide and nitrogen tetroxide) in effect reduce considerably the amount of nitrate remaining in the silage. Juices draining from silos containing high nitrate silage may be toxic.

VITAMIN A AND NITRATE—Recent field reports have suggested an apparent vitamin A deficiency in cattle when fed forage high in nitrate. Adequate experimental evidence explaining the precise role of nitrate in its relationship to carotene and/or vitamin A has not been presented.

The Missouri Station (Garner, 1958) reported dietary levels of 0.6 to 1% KNO_3 on a dry matter basis fed to dairy cattle produced typical symptoms of vitamin A deficiency in 6 to 8 weeks. They recommended feeding supplemental vitamin A when a nitrate problem was suspected. They also observed that cattle grazing sudan grass pasture containing high nitrate had high blood nitrate, low vitamin A and an oversupply of carotene in the blood.

A recent study (O'Dell et al., 1960) with rats suggests that nitrate interferes with vitamin A storage in the liver. In this study, potassium nitrite (0.3% dietary KNO_3 fed) interfered with the utilization of carotene and in addition precipitated a vitamin E deficiency.

However, Illinois workers (Sokolowski et al., 1960) fed lambs rations containing 4% nitrate (6.4% KNO_3) for 83 days. Their results indicated dietary nitrate had no effect on blood carotene or vitamin A values.

TREATMENT OF NITRATE POISONING—It has been pointed out that drawing a sample of blood gives a rapid diagnosis for nitrate poisoning. Normal blood is red and becomes brighter on standing. Methemoglobin blood is brownish in color and does not brighten as rapidly. Whitehead and Moxon (1952) noted that freshly drawn blood stored at room temperature had 30 to 50% of the methemoglobin changed back to oxyhemoglobin within two hours. The remainder changed at a gradually decreasing rate.

Animals acutely poisoned with nitrate should receive speedy veterinary treatment. Treatment consists of injection of a chemical that acts as an oxidation-reduction system to reverse the reaction of oxyhemoglobin to methemoglobin. A 4% solution of methylene blue injected into the blood stream to provide 2 gm. of methylene blue per 500 lb. of animal has effected rapid recovery in cattle (Whitehead and Moxon, 1952). Other concentrations of methylene blue and chemical reagent have also been effective.

FEEDING HIGH NITRATE FEEDS—When conditions are such that nitrate accumulates in forages (seeds usually have little nitrate), samples of suspected feed should be analyzed. When the nitrate content of the feedstuff is known, lesser amounts of the high nitrate containing feed should be fed. This can be done by feeding feeds low in nitrate in combination with high nitrate

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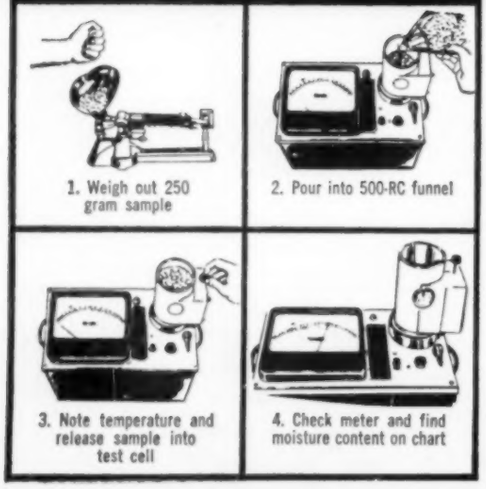
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feeds. Analysis of suspected feeds may be used as a guide for dilution.

Various reports have suggested that high energy feeds, such as corn or molasses, and also protein supplements increase the tolerance of livestock to nitrate poisoning.

Ensiling forages with high nitrate content would also reduce the nitrate content since the fermentation reduces the nitrates to gases.

v v

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FDA Seizes Poultry

TAMPA, FLA.—Federal authorities have seized 4,500 ib. of dressed chicken shipped here from Pennsylvania and permission is being sought to destroy it, it is reported here.

The shipment was seized on the grounds that the poultry had become decomposed. Seizure was made by the U.S. Food and Drug Administration. This is the agency seeking a court order allowing it to dispose of the shipment.

The suit stated the shipment came from Producers Cooperative Exchange, Coatesville, Pa., and that the shipment decomposed after arriving in Tampa Feb. 23 where it has been held for sale.

Southern States Co-op Adds New Swine Feed

RICHMOND, VA.—Southern States Cooperative, Richmond, has announced the addition of Sow Feed to its swine feeding program. The new addition is available in either mash or 12/64 in. pellets.

This feed is said to be formulated for feeding as a complete ration to dry sows, gilts from about 150 lb. to breeding, gilts and sows during gestation and sows during lactation period.

Up until recently, SSC's recommendation for the above situations has been 16% Pig Developer. This feed will continue to be listed in SSC's swine feed program, but will be recommended only in connection with pigs being fed for market, according to SSC officials.

Sow Feed will carry the following guarantee: Protein (minimum) 15%, fat (minimum) 5%, and fiber (maximum) 5%.

MILLERS TO THE TRADE

In the course of more than 60 years of service to formula feed manufacturers, Fruen Milling Company has established a reputation for quality and service at competitive prices.

Today, with competition even keener than before, Fruen's experience and know-how can provide feed manufacturers with grain ingredients that maintain profits without sacrificing quality.

Contact Your Broker or Dealer
Fruen Milling Co., Minneapolis, Minn.
FRanklin 4-2142 or Teletype MP 477

Fruen's

DON'T KID YOURSELF

about the cost of building a new mill . . .

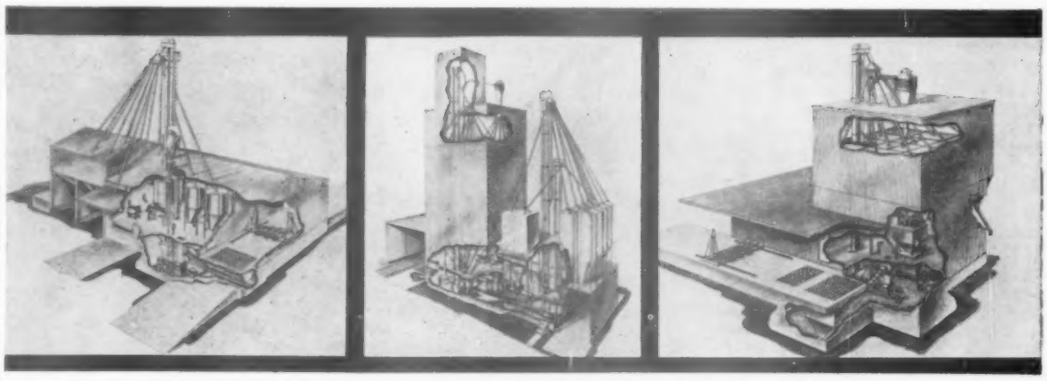
There's more than meets the eye in any mill construction project. Most people tend to think only in terms of the major pieces of equipment and the structure which houses them. That's why they rely on reputable engineers and contractors to plan each detail for them and furnish comprehensive cost quotations.

Unfortunately, some mill owners have found to their regret that the low bids they accepted from some contractors were low only because they were incomplete. The addition of such vital things as complete wiring and ductwork, motor starters, air cylinders, and countless other "minor" items sky-rocketed their costs after it was too late to do anything about them.

You wouldn't think of buying a new car without a starter, spark plugs, generator, or other similar equipment. But people actually do buy mills under much the same conditions, only to find out that they must come up with extra money before the mill will even run.

You can avoid this danger completely by asking us to bid on your next mill construction, expansion, or modernization project. All Myers-Sherman feed plants are engineered complete to every last detail . . . and *quoted* that way, too!

Best of all, this simple protection costs you nothing. We'll be glad to discuss your project with you, survey your requirements, and furnish recommendations without any obligation. Send for our free booklet that tells you all about our complete services today.



Myers-Sherman engineering experts create new and better mills of every type and size . . . from small custom mixing to full-scale manufacturing operations. We handle the entire job from start to finish . . . engineering, financing, and construction, or any part of it you wish. Choose one of 54 convenient purchase plans or even lease the entire installation!

Best of all, the quality and workmanship of every piece of Myers-Sherman equipment you operate is fully guaranteed and backed by the Myers-Sherman reputation for sound engineering design, quality workmanship and construction. When you call on Myers-Sherman you can count on getting the best mill for the money.

MS

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3501 S. Illinois St., Streator, Illinois

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MANAGERS' WORKSHOP—"Students" at the fourth annual Iowa State University managers' workshop for elevator and farm supply businesses took time out during their two-day sessions to pose for this photo.

Front, from the left (all from Iowa): James Higgs, Farmers Cooperative Elevator Co., Radcliffe; Arnie Gertsen, Farmers Cooperative Grain Co., Story City; Edward Rockaw, Farmers Grain & Lumber Co., Dows; William Opperman, Manning Mill, Manning; Paul Steege, Fredericksburg Produce Assn., Fredericksburg; J. D. Hayes, Cooperative of Hudson, Hudson.

Back row, from the left: Keaneth Nollen, Cox Grain & Feed, Tennant; Elmer Quee, Fostoria Cooperative Elevator, Fostoria; Clem Milder, Quaker Oats Co., Emmetsburg; Maurice Hoppe, Jesup Cooperative Elevator, Jesup; Urban Knobbe, Farmers Cooperative, Farnhamville; Bernard Cox, Cox Grain & Feed, Tennant; S. J. Strong, Farmers Cooperative Elevator Co., Earlham; Bill Clayburg, Farmers Elevator, Inc., Mason City; Richard Guise, Delmar Grain & Feed Co., and Glenn E. Harman, Farmers Elevator, Inc., Mason City. Co-sponsors of the workshop, along with Iowa State, were Farmers Grain Dealers Assn., and Western Grain and Feed Assn., both Iowa organizations.

USDA Study Shows Normal Price Changes Of By-Product Feeds

WASHINGTON — A recent study made by the U.S. Department of Agriculture shows the normal month-to-month changes in prices of many by-product feeds. The study was based on prices during 1948-59 and the wholesale market considered to be the most important for each feed.

Here are some of the findings of the study, as noted by William R. Askew, USDA Economic Research Service:

Soybean and cottonseed oilmeal—the two principal oilmeals — have slightly different seasonal price patterns. Soybean meal prices at Decatur normally rise from October to July and then decline.

Cottonseed meal prices at Memphis rise during the fall. After reaching a peak in January they drop to a level that is normally maintained until June. During July and August they rise to the highest level of the year.

The difference in these price patterns can be important. Instead of buying a particular feed when prices are low and storing it for future use, some operations may shift to the other feed.

Meat meal, a leading animal protein, has a seasonal price pattern at Chicago that is almost opposite that of **fish meal** — another major source of animal protein. Meat meal prices are high from July through September when fish meal prices at Buffalo are normally at their lowest. From December through April this situation is reversed.

Wheat millfeeds at Minneapolis and **alfalfa meal** at Kansas City both have very pronounced seasonal price patterns. In fact, that of alfalfa meal is the most extreme of any of the 16 feeds studied. This feed is usually very low in price during the summer when production is very heavy, but makes a very sharp rise to its winter high. Wheat millfeed prices follow somewhat the same pattern as feed grains.

"In considering seasonal price changes of the various protein or by-product feeds, one can not overlook local conditions or conditions arising as a result of a particular situation," Mr. Askew said. "A late spring, an extra severe winter, or any of a number of similar things can result in an unusual demand. Likewise, there are fluctuations in the supply that can not always be foreseen. Many such situations are probably reflected in these seasonal price patterns, but no measure of their influence is available.

"Another word of caution is that the seasonal price pattern is changing for a number of these feeds. Both soybean meal and cottonseed meal showed less than an average seasonal rise in the later years of the period studied than in the earlier years."

Western Canada Faces Shortage of Hay

WINNIPEG—Western Canada will be short of adequate supplies of tame and wild hay over large areas to sustain the carry-over of normal livestock numbers unless supplementary feeds are planted, Canadian officials report. It is doubtful if more than one cutting of alfalfa and clover can be obtained.

The greatest area of deficiency in feeds of this type includes most of Manitoba and a sizeable portion of the eastern half of Saskatchewan. To offset the shortage of tame and wild hay, farmers are being urged to plant supplementary feeds, particularly oats and corn.

$300,000 FIRE

SAC CITY, IOWA—The Williams Milling Co. here suffered damage estimated at $300,000 when fire broke out in the top of a grain elevator. More than 200,000 bu. of grain was destroyed. The blaze destroyed two wooden tanks, an 85 ft. elevator and considerable equipment. John Laughlin, manager of the feed mill, said that most of the loss would be covered by insurance.

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AD TELLS
THE STORY...

NOW YOU CAN CLOSE THE SALE! Here's exciting new evidence that Morton T-M Salt puts gain on faster, at less cost! Your customers will be seeing this ad in SUCCESSFUL FARMING, FARM JOURNAL, FARM QUARTERLY, AMERICAN LIVESTOCK JOURNAL, NATIONAL LIVESTOCK PRODUCER, and leading state farm magazines. They'll remember it—be sure you remember it too! They'll appreciate your reminding them to take along Morton T-M Salt when they buy their feed, and they'll be back to do more business with you! Morton T-M Salt is a top-quality product you can recommend with confidence. What's more, it's up to thirty percent more profitable for you!

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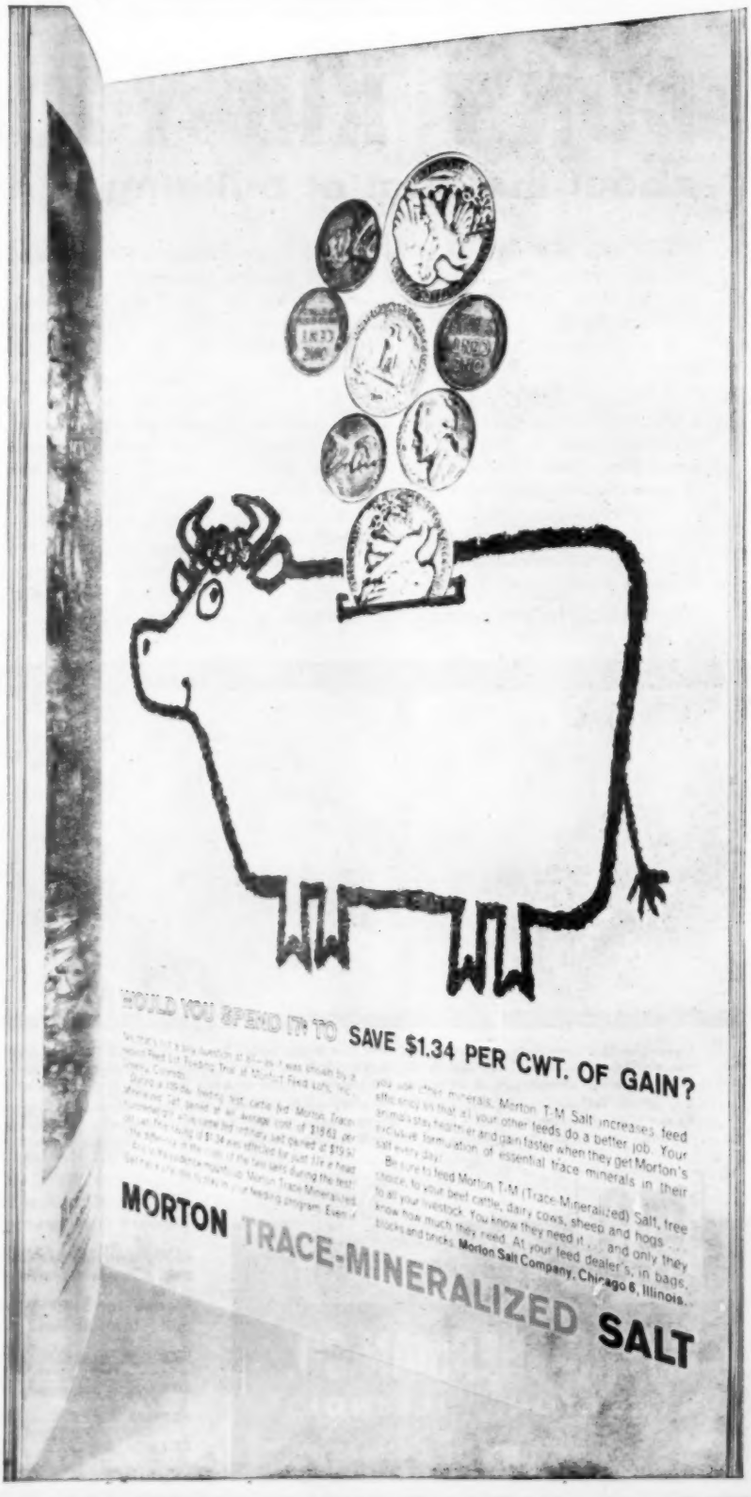
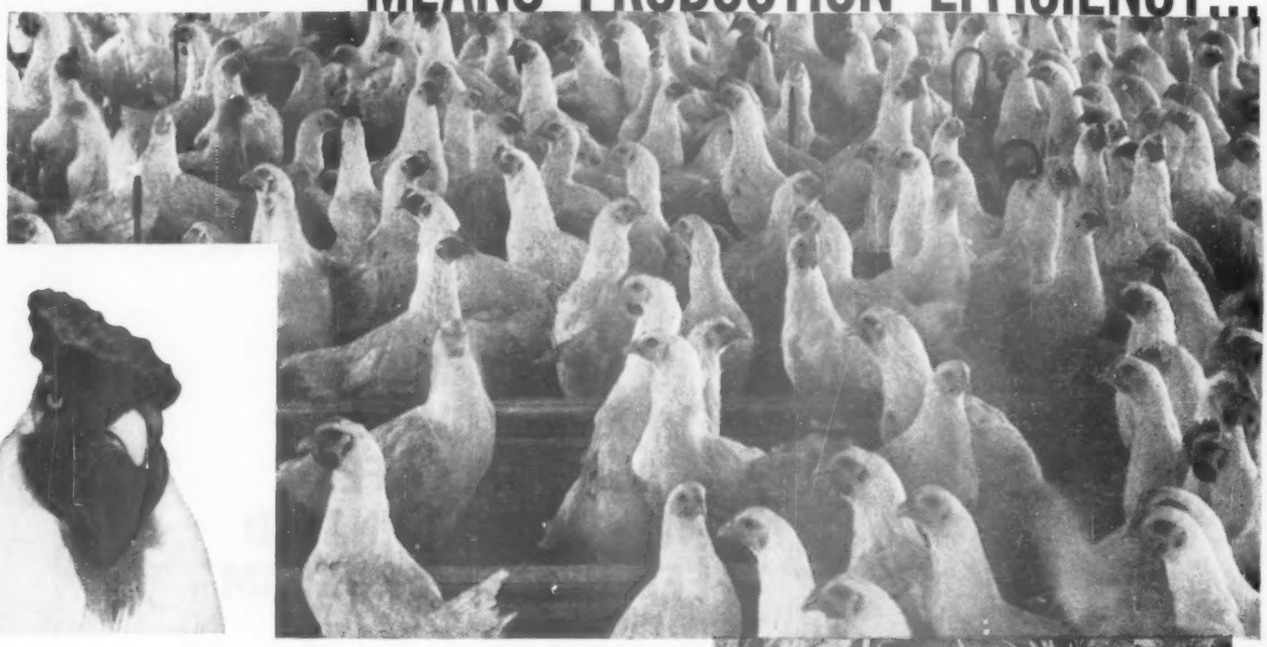
To add Morton T-M Salt to your line, write Morton Salt Company, 110 N. Wacker Drive, Chicago 6, Illinois



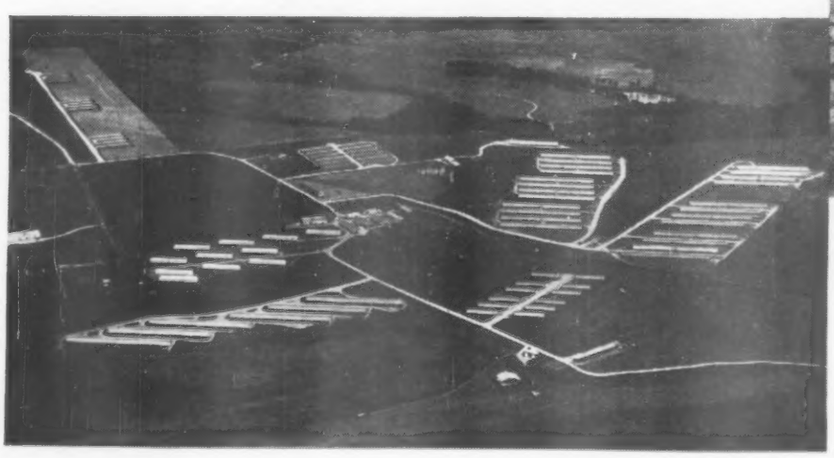
"Vantress Cross" MEANS PRODUCTION EFFICIENCY...



"Vantress Cross" MEANS CONSUMER QUALITY...

Vantress Cross meat chickens live better, grow faster, use less feed per pound of meat produced and give higher eviscerated yield.

Vantress Cross means (1) tastier and tenderer chickens because of rapid growth in the field. (2) More eye appeal because of better conformation. (3) Better meat to bone ratio and a higher percent of yield in preferred parts: Breasts, Thighs and Drumsticks.



CHAS. VANTRESS FARMS, DULUTH, GA.
DOMINANT WHITE MALE LINE

Chas. Vantress Farms

A DIVISION OF INTERNATIONAL GENETICS CORPORATION

DULUTH, GEORGIA

CYANAMID HELPS YOU SELL MORE DAIRY FEED WITH A COORDINATED FEED-HEALTH PROGRAM

Essential part of this program right now is pasture supplementation with formula feeds containing extra proteins, vitamins, minerals and Aureomycin. Many feed manufacturers are promoting such feeds and stepping up summer feed sales volume.

Increasing demand for *more milk from fewer cows* places a year-round premium on feeding to assure maximum good health.

Alert feed manufacturers have met this challenge by repeatedly urging, in their advertising and promotion campaigns, the continuous use of formula feeds beyond the winter months and through the summer as a supplement to pasture.

Value of pasture supplement

These manufacturers have pointed out that grass *alone* won't give cows all the food values they require for sustained high production. Cows bred to be high producers need extra proteins, vitamins, minerals and an effective antibiotic. This is particularly true in late summer when grass may be close-cropped and dry.

To fulfill the need for these "extras," feed manufacturers are producing pasture supplements formulated precisely to meet these needs.

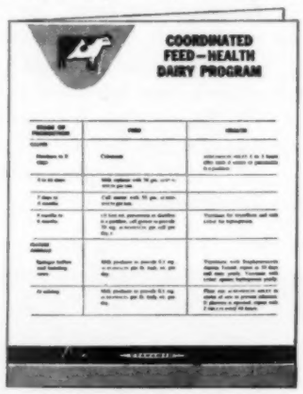
The antibiotic they've chosen for these feeds is AUREOMYCIN.® AUREOMYCIN helps reduce invisible, subclinical diseases that slow down milk flow. It is effective against respiratory infections and foot rot. It keeps cows in good health, helps prevent summer slumps in production.

If you are not now selling formula feeds containing AUREOMYCIN for pasture supplementation, plan to do so. Other feed manufacturers have found this type of feed a profitable new way to increase sales volume.

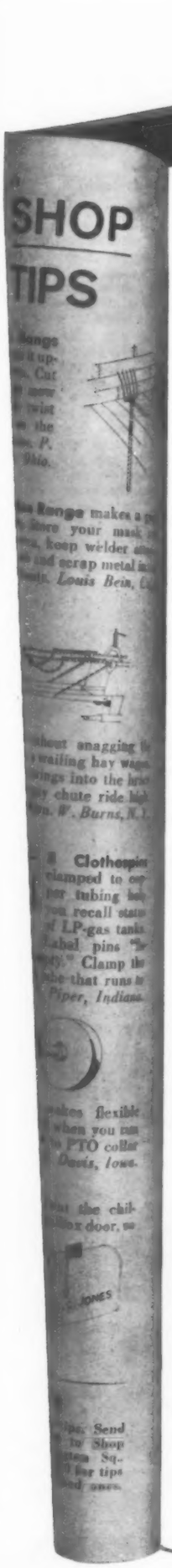
Recommend complete Feed-Health Program

You serve customers in *one* way with formula feeds for pasture supplementation. Other ways to extend your service are included in a Coordinated Feed-Health Program for dairy cows which is described, in detail, in the advertisement reproduced here.

This program is the soundest, most practical way for your producers to achieve in their herds the "high lifetime health level required for top milk production." It can be a continuous business builder for feed manufacturers and dealers who participate in it. American Cyanamid Company, Agricultural Division, New York 20, N. Y. ®*AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*



This folder describes the step-by-step Coordinated Feed-Health Program for dairy cows. It is for distribution to your customers. If you need extra copies, see your Cyanamid representative or write directly to Cyanamid.



HIGH LIFETIME HEALTH LEVEL ESSENTIAL FOR TOP PRODUCTION

From new-born calf through the entire productive lifetime of the cow, this Coordinated Feed-Health Program builds and maintains the good health that results in maximum production

This Coordinated Feed-Health Program is important to every dairyman because it is easy and practical to use and, with good herd management and sanitation, results in getting the best production from cows.

Briefly, the Coordinated Feed-Health Program provides a commonsense schedule for using good formulated feeds containing AUREOMYCIN,® and the vaccines and medications essential for preventing and treating diseases.

AUREOMYCIN controls a wide range of diseases. *Laboratory tests and farm use have shown no residues in milk when fed as directed.*

Cyanamid Animal Health products have long been known for their quality and effectiveness.

Together—AUREOMYCIN in formulated feeds and Cyanamid Animal Health Products—can mean a healthier herd and bigger milk checks.

Talk to your feed man. He has a free special folder for you which explains the program in detail. Ask him for it, or write American Cyanamid Company, Agricultural Division, N. Y. 20, N. Y. *®AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

1. Give the fresh cow a good start. At calving, give a good feed to provide 0.1 mg. of AUREOMYCIN per pound of body weight per day.

2. Protect your new-born calf. From new-born to 3 days, the colostrum milk is the calf's best friend. To prevent or treat calf scours, the calf should receive one AUREOMYCIN OBLET 1 to 3 hours after birth.

3. Building quality herd replacements. From 4 to 56 days of age, use a milk replacer with 50 gm. of AUREOMYCIN per ton. You prevent bacterial diarrhea and pneumonia, increase rate of growth, and raise vigorous calves.

4. Keep healthy growth. When calves are about 7 days old, feed a calf starter containing 50 gm. of AUREOMYCIN per ton. Continue for 4 months. This protects against bacterial diarrhea, foot rot, and respiratory infections.

5. Establish mastitis control program. Have your veterinarian vaccinate against staph mastitis with Staphylococcus Aureus Toxoid. Vaccinate heifers at 4 to 6 months for brucellosis and with LEBAC for leptospirosis.

6. Feed for top milk production. Use a good dairy feed or supplement which will provide 0.1 mg. of AUREOMYCIN per pound of body weight per day. AUREOMYCIN keeps cows milking up to maximum potential.

The label instructions on Cyanamid products, and on products containing Cyanamid ingredients, are the result of years of research and have been accepted by Federal and/or State Governments. Always read the labels and carefully follow directions for use.

CYANAMID

COORDINATED FEED-HEALTH PROGRAM

CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

This month, your prospective customers are reading the advertisement shown here. It appears in leading national and sectional papers. 4,455,000 impressions! These customers will also be listening to well-known Farm Directors tell the benefits of the Coordinated Feed-Health Program for dairy cows on 40 radio stations throughout the country.

Progress Report from Iowa State University

High-Concentrate, Low-Fiber Finishing Rations for Beef Cattle

- **Developing High-Concentrate Rations Adapted to Mechanical Feeding**
- **Evaluating Frequent Feeding**
- **Studying Sand as Possible Replacement for Roughage**
- **Adding Sodium Bicarbonate as an Alkalizing Agent**

EDITOR'S NOTE: *The accompanying information was presented at the Iowa Cattle Feeders Day held on the campus of Iowa State University in Ames, Iowa. Preparing the material were: Dr. Walter Woods, Dr. Wise Burroughs, Ned Raun, Ross Cooley and Clarence Bockhop. They were assisted by F. H. McGuire, Scott Moore and Harold Mesenbrink.*

The trend toward complete mechanization of feedlots has initiated interest in rations that may be handled entirely by machinery and has presented the possibility of feeding cattle several times daily. A ration high in concentrates and low in fiber would have certain advantages from the standpoint of mechanized feeding. In addition, the use of automatic feeding systems permits the feeding of cattle by time clock.

The Illinois station has reported an initial experiment showing benefits from feeding several times daily instead of the conventional twice daily feeding. The objectives in the present progress report summarizing four experiments were as follows:

(1) To develop a high concentrate-low fiber fattening ration for beef cattle that adapts itself easily to mechanical feeding.

(2) To evaluate the benefits of feeding cattle six times daily as compared with feeding twice daily.

(3) To evaluate sand as a possible replacement for roughage in high-concentrate cattle rations.

The idea that sand might in part substitute for roughage in low-fiber cattle rations was developed from detailed observations upon the lining of the rumen of experimentally fed lambs. Lambs receiving rations devoid of coarse roughage developed stomach walls which were coated with a thin layer of dark material which could be removed by scrubbing or "sanding." Following this scrubbing procedure in which the dark material was removed, the stomach lining of affected lambs took on an appearance similar to the appearance of the stomach lining of lambs which had been fed coarse roughage. Therefore, the possibility was assumed that one of the functions of coarse roughages in cattle rations might be their scrubbing or abrasive properties, and if this were true, then sand substituted for roughage in a low-fiber cattle ration might serve this same abrasive purpose.

This report summarizes four trials that evaluate the above three objectives.

Trial 1 Procedure—A high concentrate basal ration composed of rolled shelled corn, 74.5%; corn cobs, 10; molasses, 5; urea, 0.5; soybean meal, 3.8; ground alfalfa hay, 5; minerals and vitamins, 0.2% was fed. This basal ration contained 11% protein, 0.3% phosphorus and 0.3% calcium and supplied stilbestrol at a rate of 10 mg. per animal per day. The corn cobs were ground through a ¼ in. screen in a hammermill. The protein level in certain rations was raised to 14% by increasing the amount of soybean meal fed, the purpose being to determine if a higher level of protein in the ration would increase performance. Sodium bicarbonate was added to the ration at 1½ and 3% levels for the purpose of adding an alkalizing agent. The purpose of adding higher levels of calcium in this ration and the results obtained were given in another report.

Heifers were fed in this experiment for 155 days. The heifers were fed twice daily, but feed was essentially before them at all times.

Trial 2 Procedure—The basal ration fed was similar to the basal ration fed in Trial 1. This ration was compared to two experimental rations which were similar except for the addition of either 1 or 2% sand. The sand added was a high-grade white silica sand commonly called blasting sand and used in cleaning stone buildings. This sand in appearance resembled coarse flake salt or granular table sugar. The cattle fed in this experiment consisted of 18 crossbred long-yearling steers which were group fed in three lots for a period of 105 days.

Trial 3 Procedure—The purpose of Trial 3 was threefold. One purpose was to repeat the sand experiment described in Trial 2 in which a similar low-fiber ration was fed to different experimental cattle. A second objective was to determine whether a sand addition to the ration might prove beneficial to cattle receiving a higher level of roughage such as a typical Corn Belt fattening ration composed of a full-feed of cracked corn and limited baled hay and supplement. A third objective of this trial was to compare the performance of steers fed two times a day to steers fed six times a day. The steers fed six times a day were fed every four hours with the aid of a mechanical feeder. The steers were fed so they would consume their ration in about one hour after feeding for those frequently fed and in two to four hours for those fed two times a day. At the time of preparation of this report the steers had been on feed for 70 days and are expected to be continued an additional 70

TABLE 1. High Concentrate Ration for Fattening Heifers Conducted Aug. 3, 1960 to Jan. 5, 1961

	Basal			+ 1½% Bicarbonate			+ 3% Bicarbonate		
155-day experiment	11%	14%		11%	14%		11%	14%	
Total 34 heifers	Prot.	Prot.	Av.	Prot.	Prot.	Av.	Prot.	Prot.	Av.
Average initial weight, lb. ..	647	639	643	638	658	648	640	670	655
Average final weight, lb.	1,078	1,078	1,078	1,058	1,093	1,070	1,077	1,111	1,094
Average daily gain, lb.	2.78	2.83	2.80	2.71	2.80	2.75	2.82	2.85	2.83
Average daily feed consumption, lb., complete mixture	20.7	21.0	20.8	21.4	22.2	21.8	22.3	24.3	23.3
Feed/100 lb. gain	745	744	744	790	793	791	792	853	822
Feed cost/lb. gain*	14.7c	15.5c	15.1c	16.0c	16.9c	16.5c	16.4c	18.6c	17.5c

*Feed costs assigned—complete feed $41 ton, sodium bicarbonate, $5.50 cwt.

TABLE 2. Sand Addition to High Concentrate Rations for Steers Conducted Sept. 22, 1960, to Jan. 5, 1961

105-Day Experiment—total 17 steers	Basal	Basal + 1% sand	Basal + 2% sand
Average initial weight, lb.	830	813	831
Average final weight, lb.	1,191	1,201	1,247
Average daily gain, lb.	3.43	3.69	3.96
Average daily feed consumption, lb., complete mixture	26.6	27.5	27.9
Feed/100 lb. gain, lb.	776	745	704
Average carcass grade*	5.5	6.2	5.7
Average dressing per cent†	57.7	57.9	57.8

*Federal carcass grade score—Average good = 5; high good = 6.
†Dressing per cent based on full weights off experiment and hot carcass weight shrunk 2½%.

TABLE 3. Sand Addition to High Concentrate and Conventional Rations for Fattening Cattle Progress Report

	Conventional ration		High concentrate mixed ration	
70-Day experiment—total 40 steers	0	+ 2% sand	0	+ 2% sand
Average initial weight, lb.	742	754	755	753
Average final weight, lb.	962	979	972	982
Average daily gain, lb.	3.15	3.20	3.10	3.27
Feed consumption, lb.				
Complete mix	...	...	20.2	20.5
Ground shelled corn	15.7	15.3	...	...
Alfalfa hay	5.0	5.0	...	...
Supplement	1.0	1.5	...	...
Total	21.7	21.8	20.2	20.5
Feed/cwt. gain	688	685	651	627

TABLE 4. Multiple Feeding of Fattening Steers Progress Report

70-Day experiment—total 30 steers	Conventional ration Fed 2 times/day	High concentrate mixed ration Fed 2 times/day	High concentrate mixed ration Fed 6 times/day
Average initial weight, lb.	746	765	743
Average final weight, lb.	973	959	995
Average daily gain, lb.	3.13	2.77	3.60
Average daily feed consumption, lb.			
Complete mixture	...	20.5	20.1
Ground shelled corn	15.5	...	...
Alfalfa hay	5.0	...	...
Supplement	1.25	...	...
Total	21.75	20.5	20.1
Feed/100 lb. gain	686	740	558

MACHINE OF THE MONTH

AMERICAN MADE
YOUR BEST BUY

EUREKA TWIN SHOE SUPER CLEANER

GET FASTER CLEANING of any grain... and double your capacity in the same floor space... with the industry's outstanding cleaner. Choose from over 40 sizes in Twin Shoe, or in three and four-screen, 2-air Standard and Special models. Capacities to suit every requirement. Standard or All-Steel construction.

S. HOWES CO., INC. • SILVER CREEK, N. Y.

GET THE FACTS from your nearby S. Howes man, or write for Bulletin 180 on the complete line of Eureka grain cleaning equipment.

TABLE 5. Performance of Steers Fed 2% Sand in Fattening Rations
Progress Report

110-Day experiment total 60 steers	Comparison 1		Comparison 2		Comparison 3		Comparison 4		Comparison 5		Average	
	Basal	Sand	Basal	Sand	Basal	Sand	Basal	Sand	Basal	Sand	Basal	Sand
Average initial weight, lb.	797	803	803	801	802	803	802	805	796	806	800	803
Average final weight, lb.	1,160	1,176	1,182	1,189	1,170	1,172	1,181	1,187	1,172	1,181	1,173	1,181
Average daily gain, lb.	3.31	3.39	3.45	3.52	3.34	3.35	3.45	3.32	3.41	3.41	3.39	3.40
Daily feed consumption, lb.												
Ground shelled corn	15.8	15.7	16.1	16.1	14.7	14.7	15.8	15.4	16.5	16.3	15.8	15.6
Ground corn cobs*	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Supplement	2.5	3.0	2.5	3.0	2.5	3.0	2.5	3.0	2.5	3.0	2.5	3.0
Total	22.3	22.7	22.6	23.1	21.2	21.7	22.3	22.4	23.0	23.3	22.3	22.6
Feed/100 lb. gain	673	670	655	656	635	648	646	675	674	683	657	666

*Coarse ground corn cobs.

days before the experiment is terminated.

Trial 4 Procedure—The objective of Trial 4 was to determine the value of adding 2% blasting sand to a steer fattening ration composed of 20% coarse ground cobs and 80% concentrate feeds. This cattle fattening ration contained an intermediate amount of roughage to those described above. Five separate comparisons were made in this trial. The difference between comparisons was level of vitamin A and Tapazole; however, these features were held constant within each comparison. Yearling steers were fed in this trial. At the preparation of this report the steers had been on feed for 105 days.

RESULTS AND DISCUSSION—The results of the four trials are shown in Tables 1 through 5.

Trial 1—The high-concentrate low-fiber basal ration used in this and succeeding trials gave excellent all-around performance. The heifers made liveweight gains exceeding 2¾ lb. per day with feed costs under 15¢ per pound based on current feed prices. Increasing the protein level in this basal ration from 11 to 14% failed to further improve performance. This was also true in the case of the sodium bicarbonate added as an alkalizing agent.

Trial 2—The results of adding 1 and 2% sand to a high-concentrate, low-fiber ration for fattening steers are shown in Table 2. Adding 1% sand to the fattening ration increased the rate of gain by 0.26 lb. per day per steer and the adding of 2% sand increased rate of gain by 0.53 lb. per steer per day. Feed consumption was increased progressively with the two sand additions. Feed per 100 lb. of gain was improved as the level of sand fed increased. Carcass grade and dressing per cent for the steers fed the different rations were approximately similar.

Trial 3—The results of Trial 3 are shown in Tables 3 and 4. The addition of 2% sand to the conventional fattening cattle ration containing some roughage as baled hay increased gains only slightly. Feed consumption and feed required per 100 lb. of gain were similar for the steers fed the two rations. The adding of sand to the high concentrate ration, however, increased gains by 0.17 lb. per day or from 3.10 lb. per day to 3.27 lb. per day. The feed consumed per day by the steers was increased slightly by the addition of sand. The feed required per 100 lb. of gain was improved by about 6% when computed exclusive of the amount of sand in the ration.

In Table 4 is given the comparisons of the high-concentrate ration and the conventional ration for fattening steers. The steers on the conventional ration composed of ground shelled corn, alfalfa hay and supplement gained 3.13 lb. per day and produced 100 lb. of gain with 686 lb. of feed. The steers fed two times a day the high concentrate mixed ration gained 2.77 lb. per day. Feeding the high concentrate ration six times a day increased gains by 30% to 3.60 lb. per day. Feed consumption was similar between the steers fed the different number of times a day. The higher rate of gain for the steers fed six times a day decreased the feed required per pound of gain by approximately 22%.

Trial 4—The results of Trial 4 are shown in Table 5. The adding of sand to the ration containing coarsely ground corncobs failed to increase gains appreciably on the average for the five comparisons. Feed consumption was similar between groups. The feed per 100 lb. of gain was also similar between the two treatments.

The combined results of the four trials of this report would indicate that an effective high concentrate ration can be formulated for fattening beef steers. However, the economy of performance between a

(Turn to page 40)

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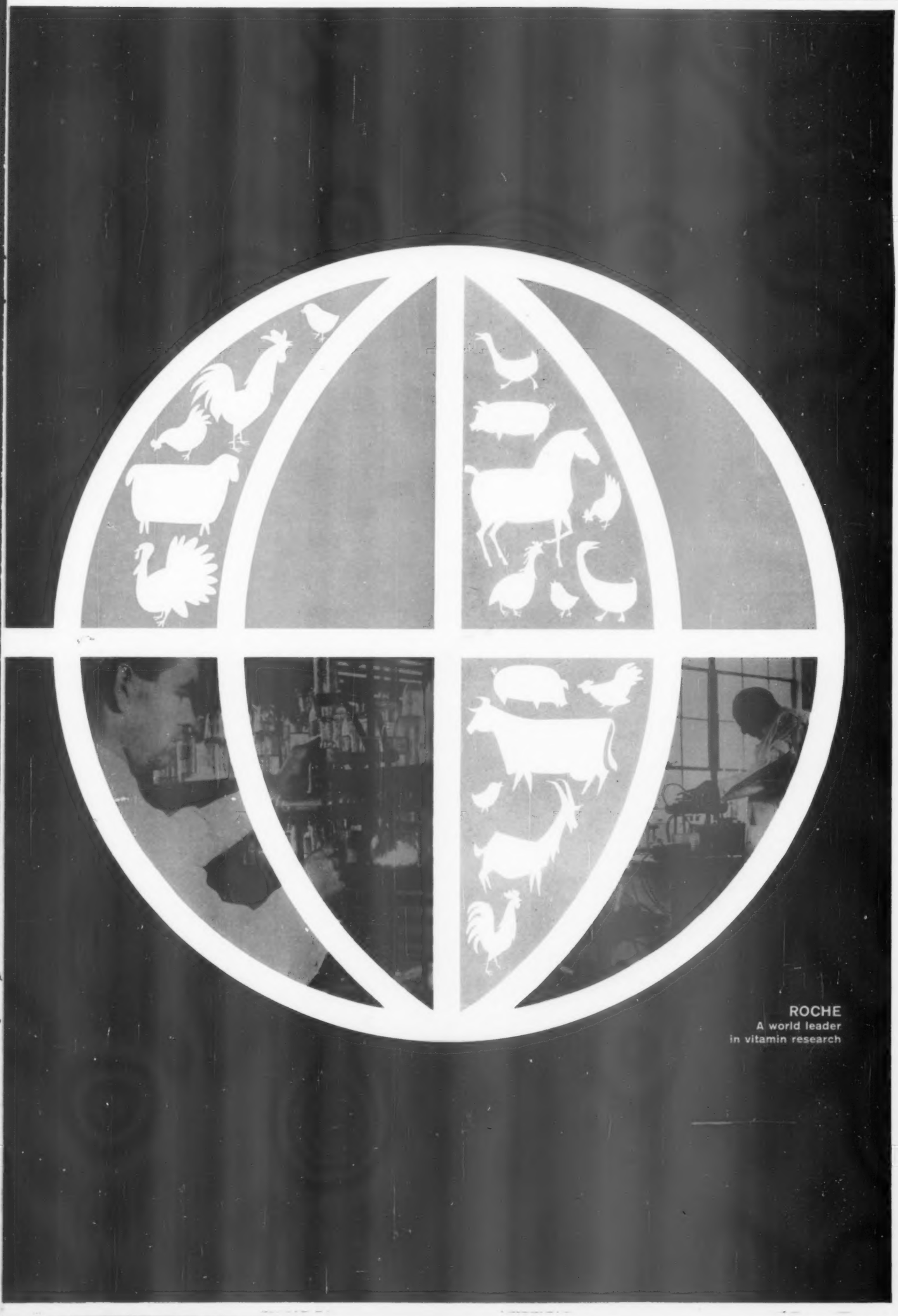
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conventional ration and a high concentrate ration has not been established.

It would appear that certain factors may influence the performance of steers fed high concentrate ration. The adding of a small amount (2%) of sand to the ration has increased gains somewhat in several comparisons. It is possible that sand may be acting somewhat like a source of roughage in these low-fiber rations and this may exert a beneficial physiological effect in this type of ration. However, since these are progress reports more time is needed to fully evaluate the adding of sand to fattening cattle rations. It would appear that adding sand to a conventional ration requires considerable more testing before recommendations can be made.

The possible value of multiple feeding of fattening cattle is indicated by this present study. Feeding ruminants several times daily may keep the rumen microorganisms at a high state of activity and could be the way in which increased performance is obtained. However, it should be pointed out that the trial reported in this study is still in progress and the large difference noted thus far may not continue. Further work is needed in both the addition of sand to fattening rations and multiple feeding before complete recommendations can be made.

Says Broiler Trade Is Playing 'Chicken'

LITTLE ROCK, ARK.—An Arkansas Gazette agricultural columnist recently observed:

"The broiler industry, which periodically engages in a deadly adult version of the game teen-agers call 'chicken,' has reached the payoff point again. The object of the game is to see who can hang on the longest in the face of shouted warnings of impending disaster."

That's what Leland DuVall thinks about the current condition of the "chicken business," in which, he says, "everyone understands a single simple rule: Get bigger or die because there is no place to stop."

The current low-market cycle is, in the writer's estimation, one of those which "wipes out a certain number of growers and suppliers. . . . Broiler producers have done an amazing job of reducing costs and improving their efficiency but it has not been enough. . . . Even the best growers will make no money for themselves or for the integrated company that supplies the feed and chicks when the market price is a full 2¢ below the break-even point."

Mr. DuVall closed his column with these comments:

"Historically, the low-market cycles actually have not reduced the productive capacity of the business. The growers who lose their farms because they are unable to meet payments on installment debts move to town and seek non-farm jobs, but the producing companies that foreclose on the property simply hire other growers to manage the houses. The surviving integrated companies move into the territories vacated by the bankruptcies of the firms that do not ride out the low markets.

"When the periods of over-production approach, no one seems able to apply the brakes. Any company that refused to fill the houses of its growers simply because there was a prospect of too many chickens would solve no problems; the growers would make deals with other suppliers. The growers, in turn, must stay busy if they hope to pay off the debts on their houses and equipment."

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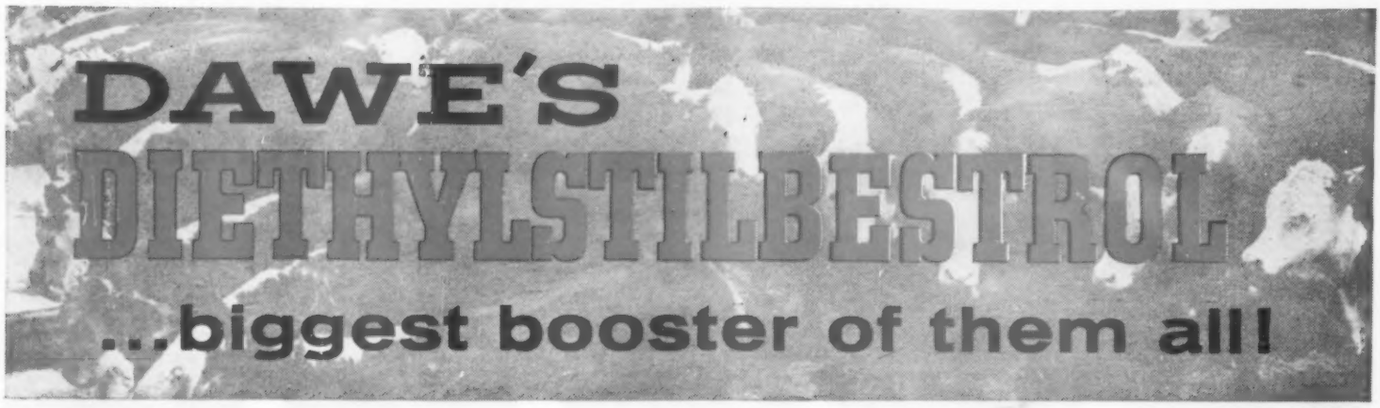

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BULLETIN!

May 31, 1961—Latest diethylstilbestrol test results released today at Iowa Cattle Feeders Day show 9.1% improvement in feed conversion. Yearling steers, fed a supplement containing diethylstilbestrol in dry lot for 139 days, returned approximately *$9 more profit per animal* than those not receiving it.

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WORLD'S OLDEST AND LARGEST SPECIALISTS IN FEED FORTIFICATION

PLANT FEASIBILITY WORKSHOP—The formula feeds extension department at Kansas State University conducted a feed plant feasibility workshop for managers of grain and feed businesses. In the first photo above, Dr. Robert Schoeff (left), who heads feed extension, is visiting with Fred Rapp, Walnut Creek Milling Co., Great Bend, Kansas. In the second picture, Richard Baker of the feed extension staff is pointing out some of the trends in the industry.

Feed Plant Feasibility Workshop

By ROGER BERGLUND
Feedstuffs Managing Editor

MANHATTAN, KANSAS—Sound analysis and planning—both nearby and long range—are increasingly important for feed business managers. This is particularly true as competition continues to increase within the industry, now in a state of greater maturity and less rapid tonnage growth.

However, there is still a good deal of feed mill building and remodeling, reflecting in part changes in the industry as well as an expanding and more specialized animal agriculture. And to help Kansas feed business managers who are considering building a new feed mill or remodeling existing facilities, a feed plant feasibility workshop was held recently at Kansas State University.

The two-day workshop, with limited enrollment, was conducted by the formula feeds extension department at Kansas State, in cooperation with the Kansas Feed Manufacturers Assn. and the Kansas Grain & Feed Dealers Assn.

Dr. Robert Schoeff, an agricultural economist with experience in industry, heads the feed extension program and is assisted by Richard Baker, who has a master's degree in feed technology.

The workshop covered all steps which must be taken in determining the feasibility of plant construction or remodeling. Some of the information which was brought out in discussions presented and led by Dr. Schoeff and Mr. Baker will be found in the accompanying articles. Other information will be presented in subsequent issues. (Also see a summary of a talk on financing in the June 10 issue of Feedstuffs.)

Rapid growth of the feed industry has been accompanied by many changes in production and marketing, it was pointed out, and anticipated changes in production of meat, milk and eggs in Kansas and the U.S. "make it imperative that those now in the feed business or considering entering this field carefully analyze their current situation before investing sizable sums of money.

"Recent surveys and inquiries indicate that many grain and feed firms are considering adding custom mill facilities. The workshop was designed to help the feed man analyze his problems and get the necessary facts so that a sound decision can be made that will enable his firm to offer services farmers desire at a cost they feel they can afford to pay, and at the same time be able to grow and prosper in the years ahead."

Major Trends and Developments—Past, Present and Future

Before going ahead with any feed mill project, it's necessary to take a look at present and future developments and trends in agriculture and the industry nationally and in one's own area.

With this in mind, some of the major factors in the past, present and future of the feed industry were outlined at the feed plant feasibility workshop at Kansas State University.

Dr. Robert Schoeff and Richard Baker traced developments of interest and importance to feed men in all areas, as well as to those in Kansas specifically, and then detailed some of the future trends which are foreseen.

Past and Present

Dr. Schoeff, who has developed a good deal of historical information on the industry, pointed out that the Blatchford Calf Meal Co. in Illinois, started in 1875, is generally recognized as the oldest feed company in the U.S. And he went on from there to spell out some of the history and growth of the industry, leading up to the present time.

He mentioned, among other things, the shift in recent years away from large central plants to smaller mills in many instances. Back in 1929, there were some 20 plants in the Kansas City area, producing more than 900,000 tons of feed annually—mostly complete feeds distributed through dealers. Today there are 10 mills, turning out 500,000 to 600,000 tons.

The pattern has generally been one of decentralization, and there has

(Turn to PAST AND PRESENT, page 45)

Future

A summary of likely future trends was presented by Mr. Baker. This included the following:

Demand for Feed—The U.S. population is now at 185 million and is expected to reach 220 million by 1975. The shift in food consumption is to more protein foods, meat products especially.

Demand for feed can be expected to increase at least 25% by 1975.

In Kansas, there is expected to be more livestock feeding, and there is now more interest in feeding in the southwestern part of the state. There is more interest in beef cattle than hogs, and more emphasis on swine is needed.

Dairy and egg operations are un-

(Turn to FUTURE, page 47)

• • •

Long Range Planning—A Must!

You can't get away from it. Long range planning is now a must for feed firms and other businesses which are serving or are a part of the rapidly changing agriculture.

This was pointed out by Dr. Robert Schoeff, who outlined some of the what, why and how of long range planning in the feed industry.

"The agricultural industry," he emphasized, "is operating in a rapidly changing environment. Economic trends and technological changes affect the operations of every agricul-

(Turn to PLANNING, page 44)

WORKSHOP PARTICIPANTS—Some of the feed men who attended the feed plant feasibility workshop are shown here. In the first photo are G. F. Hines (left), Hines Farm Center, Wamego, Kansas, and C. C. Ward, Ralston Purina Co., Kansas City. In the second picture (left to right), are Clayton Walker, Walker Grain Co., Burr Oak, Kansas; Linn Lundstrom, Linsborg (Kansas) Grain Co.; P. J. O'Connor, Evans Grain Co., Salina, Kansas, and Hugo Kieckhaefer, Marysville (Kansas) Grain, Inc.

Feed Plant Feasibility Checklist

Anyone planning a new or remodeled plant facility for the production and distribution of formula feeds should have a complete checklist of points which must be considered before going ahead with the project. This applies to small as well as large mills. Failure to consider just one or a few of the many factors which must be considered and evaluated has brought serious problems or failures for some feed businessmen.

A checklist which may be used as a guide by feed men determining the feasibility of a new or remodeled facility was presented at the feed plant feasibility workshop by Dr. Robert W. Schoeff.

This particular checklist is one which would be used primarily by a larger feed manufacturer. However, many of the same points must be considered by custom or local mills, and the checklist may be adapted, with certain changes, for use by feed businesses of most sizes and types.

Many of the things brought out in the checklist were the subjects of discussion by Dr. Schoeff, Richard Baker and members of the audience at the workshop, and these discussions will be summarized in a subsequent issue of Feedstuffs. Meanwhile, here is the checklist which was presented to feed men at the workshop:

PLANT FEASIBILITY CHECK LIST

It is essential to the successful planning of any new feed handling, feed processing, or feed manufacturing facility that management give careful, realistic, and thorough consideration to the following factors:

I. GENERAL AREA CONSIDERATIONS

A. What is the sales potential in market area under study?

1. Define market area to be serviced.
2. Obtain livestock and poultry numbers within area.
3. Compute potential by multiplying livestock and poultry numbers by annual feed consumption for each production system.
   a. Annual feed consumption for different livestock and poultry

FEED EXTENSION PROGRAM

The formula feed extension program at Kansas State University—designed to serve the feed industry specifically—is the only agricultural extension program of its kind in the nation. The Kansas program is a pilot program, and, based on experience in this program, the U.S. Department of Agriculture is expected to take steps to see that similar programs are developed in other states.

As pointed out at the plant feasibility workshop by Dr. J. A. Shellenberger, head of the flour and feed milling industries department at K-State, a great deal of information has been developed by the feed extension personnel. The objectives of the program, he noted, are to help the industry adopt new tools; to aid in improving such things as marketing, formulation, management and manufacturing, and to stimulate research. The plant feasibility workshop is one example of the special activities to be conducted.

After sufficient experience has been gained in the pilot program in Kansas, it is expected that workers will be trained in other states to carry on similar programs.

production systems can be developed by actual contact with farmers in area to determine what is now being done and by consultation with qualified nutritionists and agricultural specialists familiar with the area.

4. What is a fair share of this potential for your company?

5. Analyze competition in market area.
   a. Feeds offered.
   b. Competitive prices.
   c. Service provided.

6. Determine the effect of a new plant on your present position in this market.
   a. Lower costs resulting in lower prices.
   b. Better service to customer.
   c. Increased profits to company.

7. Correlation with your long range planning.
   a. Effect of this manufacturing or distribution point on your other company operations.
   b. Will this plant satisfy future need as well as present?

8. Availability of raw materials.
   a. What materials will be needed.
   b. Source.
   c. Price.
   d. Quality.
   e. Milling in transit advantages.
   f. By rail, truck, water.

B. What are the needs in the market area under consideration?

1. Concentrates.
2. Complete feeds.
3. Farm supplies.
4. Feed ingredients.
5. Bulk delivery.
6. Farm delivery.
7. Grinding and mixing.
8. Marketing of livestock, poultry, etc.
9. Form of feeds (Meal, Crumbles, Pellets).
10. Grain bank.
11. Molasses blending.
12. Grain drying.
13. Credit.
14. Hay grinding and pelleting.

C. What methods of distribution will be used?

1. Rail—volume and delivery cost per ton.
2. Truck.
   a. Rates.
   b. Availability of suitable backhauls.
   c. Leased, company owned or common carrier.
3. Waterway—volume and delivery costs per ton.

D. What allied operations will be carried on at this plant?

1. Grain merchandising.
2. Soybean processing.
3. Flour milling.

II. SPECIFIC PLANT LOCATION CONSIDERATIONS.

A. Transportation.

1. Railroads.
   a. Transit arrangements.
   b. Switching limits.
   c. Reciprocal switching.
   d. Adequacy of service.
2. Trucks.
   a. Highway systems.
   b. Loading and unloading space and accessibility.
   c. Weight limits.
3. Waterways.
   a. High and low water limits.
   b. Channel dredging requirements.
   c. Permission required from Army engineers or other governmental bodies.
   d. Is year around operation limited by current, ice, winds, low waters or other factors?
4. Airlines and airport facilities.

B. Land.

1. Area required for present operation and projected expansion.
   a. Plan for adequate customer parking and smooth traffic flow pattern.
2. Preparation required for grade and spur track accommodations.
3. Unusual exposures—wind, ice, flood, other industries.
4. Soil loading condition for present planned buildings and future expansion.

C. Utilities.

1. Availability and cost of power, fuel, water, sanitary connection and storm drainage.

D. Surrounding Territory.

1. Will plant fit into surroundings to be a good neighbor?

E. Labor.

1. Supply.
   a. Are they city or rural?
   b. What race?

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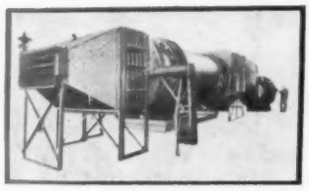

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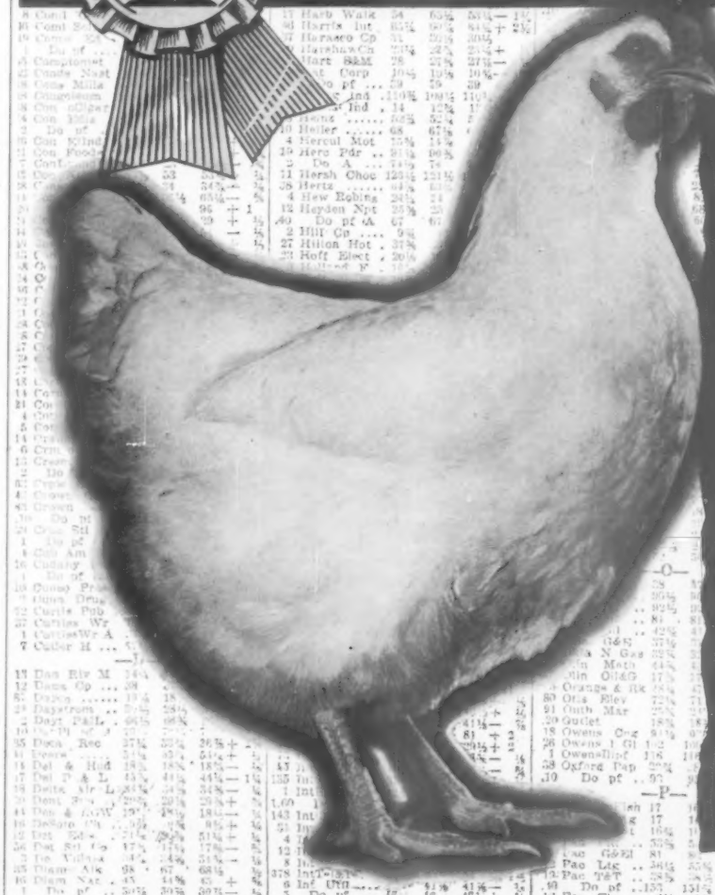

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c. Skilled or unskilled?
d. What is availability of machinists, millwrights, etc.?
2. Unions.
3. Labor relations in community.
4. Wage scales.
a. Can a wage survey be made among local industries?
5. Local and state laws.

F. Waste Disposal Facilities.

1. Costs and limitations of sanitary system.
2. Regulations governing disposal into rivers and streams.
3. Air pollution laws and requirements—would this plant constitute a nuisance to the community?

G. Local Government.

1. Attitude.
2. Taxes.
3. Construction codes.
4. Special laws and regulations.

H. Business Facilities.

1. Banks.
2. Communications, telephone, postal service, etc.

I. Community Facilities.

1. Housing.
2. Schools and churches.
3. Hospitals.
4. Recreation facilities.
5. Fire protection.
6. Police protection.

III. PLANT FACILITY OR SIZE REQUIREMENTS

A. Capacity required.

1. Presently based on sales potential and share of market forecast.
a. Design mill with this productive capacity in mind.
2. How much may be needed for future expansion?
a. Plan initial mill with expansion possibilities. If and when demand or technological advances warrant more capacity, the expansion can be done at minimum cost.

B. Ingredient storage.

1. Bulk.
a. Capacity needed—what ingredients?
b. Drying and cleaning facilities required.
c. Unloading and handling facilities required.
2. Sack.
a. Floor capacity required—what ingredients?

C. Feed Mill.

1. Medication problems.
2. Batch or line plant.
3. Tonnage expected within one year, its form and method of distribution.
a. What feeds are to be manufactured?
b. By truck.
(1) Dealer truck.
(2) Company truck.
c. By rail.
d. Bulk shipments.
(1) Truck.
(2) Rail.
e. Sack shipments.
(1) Truck.
(2) Rail.
f. Pellets and crumbles.
(1) What feeds?
4. Tonnage expected within two years, its form and method of distribution.
a. What feeds are to be manufactured?
b. By truck.
(1) Dealer truck.
(2) Company truck.
c. By rail.
d. Bulk shipments.
(1) Truck.
(2) Rail.
e. Sack shipments.
(1) Truck.
(2) Rail.
f. Pellets and crumbles. What feeds?
5. Tonnage expected within five years, its form and method of distribution.
a. What feeds are to be manufactured?
b. By truck.
(1) Dealer truck.
(2) Company truck.
c. By rail.
d. Bulk shipments.
(1) Truck.
(2) Rail.
e. Sack shipments.
(1) Truck.
(2) Rail.
f. Pellets and crumbles.
(1) What feeds?
6. Warehouse floor space required.
a. Truck loading spots.
b. Car loading spots.
c. Use of pallets and fork truck.
7. Power requirements and supply.

D. Auxiliaries.

1. Maintenance and repair.
2. Laboratory.
3. Office.
4. Employee service facilities.

E. Number and kind of workers required to operate mill.

F. Obtain a pre-construction cost estimate based on above requirements.

PLANNING

(Continued from page 42)

tural firm. Managers of these firms serving agriculture are called upon to make decisions which have long-range implications. Such long-range decisions necessitate a 'look into the future' which may take the form of business planning specifically oriented to long-run decision ma...ng. Our term for such planning is long range planning.

"Long-range planning is designed to improve the profitability of agricultural firms and to develop a more orderly business structure in general."

What is long-range planning?

In terms of time, long-range refers to a period sufficiently long that all factors or parts of a business can be changed. This means buildings, machines, products and personnel.

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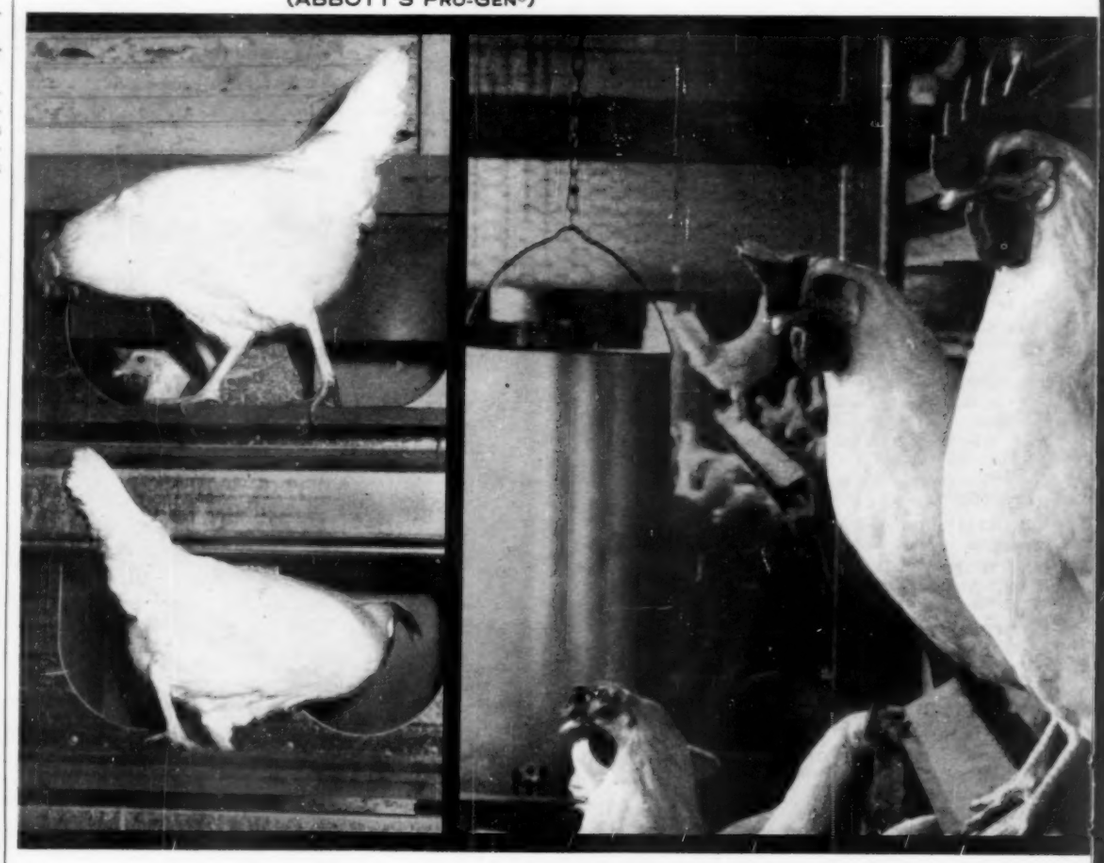

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When good feeds, top management and first-rate housing combine to keep hens healthy, laying percentages are almost sure to be satisfactory. But these three basic factors of good poultry raising cost money—extra money. They represent ideals . . . always desirable but not always attainable.

Arsanilic Acid Works Best When It's Needed Most. Most egg producers take a practical viewpoint. They know they can't operate like a research farm. Yet, production is the lifeline of their business . . . so, they turn to Arsanilic Acid to help keep hens healthy—keep production up.

Almost every hen is host to disease germs. Under practical conditions—during stress—hens may lack the vitality to fight off infection. That's where Arsanilic Acid comes in . . . and the tougher the battle, the harder Arsanilic Acid fights. It opposes harmful bacteria in the intestinal tract—helps protect against active disease—helps prevent laying slumps.

REMEMBER TO ORDER
CHASE BAGS
There's None Better!

CHECK FEEDSTUFFS WANT ADS!!

Timewise, many firms use five years as the long-range planning period.

Long-range planning is making farecasts of future business and technological conditions, and basing decisions on these forecasts.

Why do long-range planning?

1. Set goals and objectives.
2. Detect problem areas.
3. Coordinate decision making, under an over-all pattern.
4. Give business continuity. (More firms are now incorporated, which helps in carrying them forward.)
5. Provide means for evaluation.
6. Blueprint business operation.
7. Determine credit agencies required.
8. Plan personnel needs—more or less, who, where, etc.
9. Improve efficiency.

How to do long-range planning.

1. Analyze firm's records.
2. Analyze industry trends.
3. Hunch or guess—use some of this, too.
4. Forecast—(a) U.S. economy. (b) Industry, including tonnage, kinds, etc. (As one example, some firms are expecting more use of premixes; others are exploring developments in this area.) (c) Own firm's sales and profits.

Can't predict:

1. Weather.
2. Government policy.
(3. Women.)

Challenge to Management

Although planning does not necessarily lead to growth, growth seldom occurs without planning. A recent study states that: Companies that have grown rapidly have given evidence of supporting future growth programs such as those for: (a) Long-range company planning, (b) product research and development, (c) market research, (d) diversification into other product fields and markets, and (e) acquisition of other companies.

In a growing economic environment, planning is necessary if the manager expects to take full advantage of opportunities, Dr. Schoeff pointed out.

PAST AND PRESENT

(Continued from page 42)

been more use of concentrates, more custom milling, etc. Today, as market structures have changed, there is more emphasis on satellite mills and custom mills.

Who will make the feed? Dr. Schoeff defined the principal factors in the business as follows: (1) Feed manufacturer, who buys most of the ingredients, formulates and markets under a brand name through dealers or direct; (2) manufacturer-retailer, who may be defined similarly but markets direct in a nearby area; (3) custom feed dealer, a retailer offering custom grinding and mixing; (4) mobile feed miller, providing custom service on the farm; (5) farm mixing.

Among feed manufacturing firms, it was noted, there now are quite a number of plants which produce 50,000 to 60,000 tons annually, on an eight-hour basis. Many plants now serve an area within a radius of 50 to 100 miles, compared with greater distances previously.

Dr. Schoeff mentioned some operations in other areas as examples of present and possible developments. For example, he cited a California plant, specializing in laying feed, which makes feed with an average labor requirement of 0.2 man-hour per ton.

While feed men in many areas cite a trend toward smaller plants, one large new plant in the West has a capacity of 500 tons in eight hours, using two 3-ton mixer lines. Another plant was mentioned which is large but is expected to serve a radius of 50 to 75 miles, and the big investment in this type of mill is said to be justified.

Commercial feedlots are increasing in number, and operators of most of these seem to want to make their own feed. However, said Dr. Schoeff, more feedlot operators are taking a second look at a complete feed milling set-up, and some are now more interested in buying premixes or concentrates. There is still an important potential for the feed industry in supplying products to larger feeders.

In Kansas, a key to more feed business operations is the grain sorghum crop, now up to some 130 million bushels, but with about half of it shipped out.

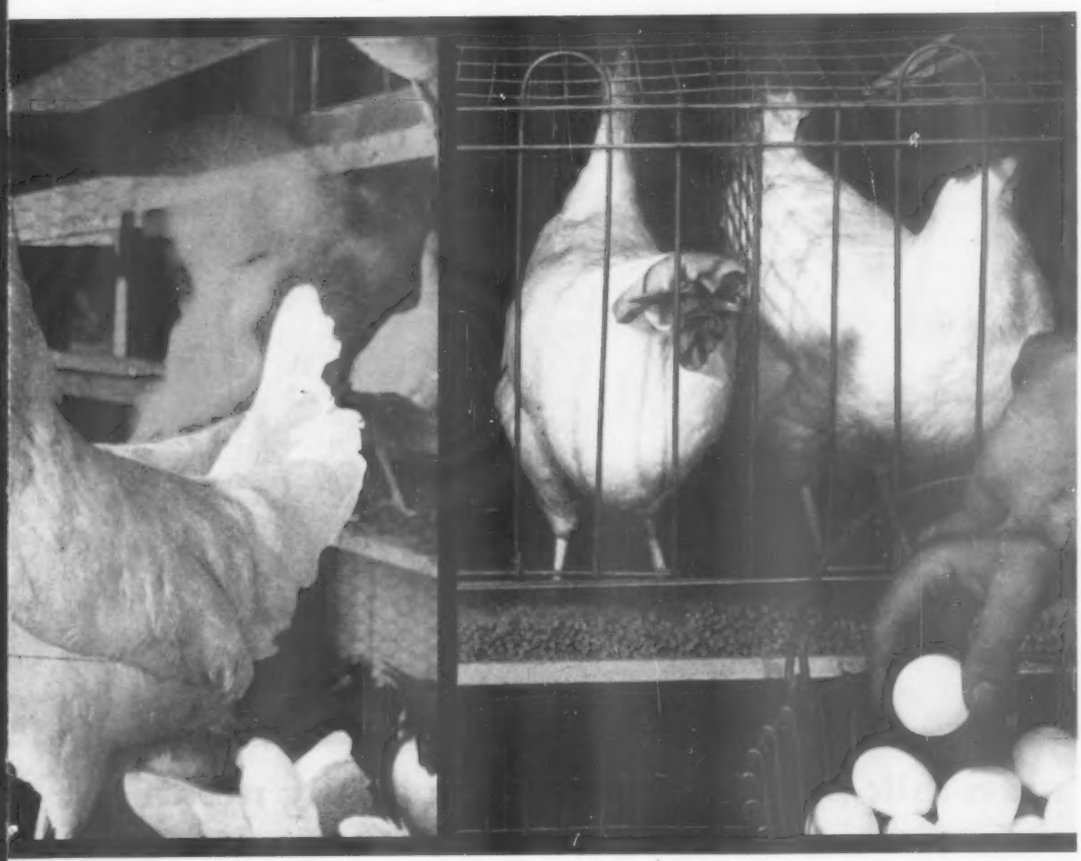
In discussing the Kansas feed industry, Dr. Schoeff noted some of the results of a 1960 survey which covered 116 dealers in 10 counties. (By the way, on the basis of this, it was estimated that there are about 1,200 dealers in Kansas who are in the feed business to varying extents.) Of the dealers surveyed, 51% just retailed feed; 35% offered custom services, too; 14% were manufacturer-retailers.

Among all of these dealers, figures on sources of income showed that grain accounted for 60% of the total and feed only 18%, with other supplies and services accounting for the remainder. This indicates, said Dr. Schoeff, that some dealers do not pay much attention to feed, many will have to get into feed more extensively or get out of the business. Only 50% of the dealers surveyed expect their feed sales to increase. However, 36% of the total expect to remodel or build new mill facilities.

Current agricultural changes in Kansas of importance to feed men include some new poultry operations; more farm feedlots; more interest in hogs and, in dairying, a trend toward larger units concentrated around cities.

With all of the grain sorghum in the state, it is considered surprising that there is not more custom milling. Farther east in the Midwest, there are about 15 mills per county; things have not developed so rapidly in Kansas, however.

in so many 1961 layer feeds!



Low Cost—Big Returns. Arsanilic Acid is the low-cost production builder that helps hens fill more egg baskets any time of year. It costs only a couple of pennies per hen per year—costs so little your customers can't afford to be without it. In a 12-month feeding trial in Michigan, a good ration plus Arsanilic Acid produced 15.7% more eggs. Yet, an increase of only two eggs a day per 1,000 hens paid for the Arsanilic Acid.

Useful In All Types Of Feeds. Every year, more egg producers are asking for low-cost Arsanilic Acid in all their poultry feeds. Not because they're trying to replace good feeds, good management and good facilities with medication, but because they know that, under practical conditions, Arsanilic Acid-fed hens stay healthier and lay better.

Available In Two Convenient Forms. Arsanilic Acid is available in pure form or in premix form (one pound of premix is enough for one ton of complete feed). It's manufactured by Abbott and sold under the trade name PRO-GEN®. Ask your Abbott man for details, or call Abbott Laboratories, Chemical Marketing Division, North Chicago, Illinois. 101585

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Each year, over 400,000,000 broilers are fed through to market weight on feed fortified with Cura-Phos. Add to that poults, swine, sheep and beef cattle. **Results are always the same** — top growth, health, bone formation and feed efficiency.

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Cura-Phos costs less than any other phosphorus supplement on the market. (Savings run as high as $10.00 per ton.) It's no surprise to feed men that high-performance Cura-Phos outsells all the other brands.

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FUTURE

(Continued from page 42)

der pressure. Distance from major markets is one problem. Egg production costs in Kansas are favorable, but marketing is a problem. Some persons are pessimistic about the future for laying flocks. The state has been declining in this phase of animal agriculture, and some think there will be at least some more decline. However, many eggs are moving to Texas, New Mexico and Colorado, and some feel there is an opportunity for more of this business.

In connection with egg production, it was noted that egg breakers in the area formerly bought surplus eggs. Now there is more contracting, and one operator is on a contract basis 100%.

Dairying, it was indicated, is shaking down to fluid milk operations around the major markets.

Growth of Industry—It is difficult to predict the actual tonnage of formula feeds that will be sold 5, 10 or 15 years from now because of mixed trends within the industry as to sale of complete feeds, concentrates or premixes. However, total formula feed sales are expected to increase during the next few years.

Decentralization—The trend which finds feed manufacturers moving closer to their market areas continues. However, this does not in all cases mean smaller mills; in some heavy poultry areas, for example, there still may be larger plants. Mr. Baker directed attention to recent completion of two large mills on the West Coast; one $2 million-plus plant has a capacity of 400 to 600 tons per eight-hour shift.

Farm Processing—There will always be some farmers who want to make their own feeds, but no great volume will be accounted for in this way. On-farm grinding and mixing will be confined primarily to the Midwest. The mobile mill was said to offer "a real service to farmers short on capital and labor and some distance away from a retail dealer offering custom grinding and mixing."

Commercial Feedlots—This form of feeding cattle attracts a lot of attention with prices favorable and numbers expanding. The rapid growth of these lots is expected to result in some readjustment as profit margins decline. As prices drop further, the expansion is expected to taper off.

Some feed dealers and manufacturers will set up commercial lots to utilize available milling capacity.

Direct Selling—There is expected to be more of this as farms get larger and some retail dealers fail to provide products and services desired. There will be a decline in part-time dealers, such as some grocery stores. Mark-ups are in excess of services rendered in some of these cases.

A progressive, well equipped and well informed dealer can effectively compete against direct selling operations.

Integration—This, said Mr. Baker, is here to stay in one form or another. Broiler and turkey production is nearly 100% integrated. Egg production is moving in this direction more rapidly than many feed dealers and farmers appreciate. Hog and beef production can be expected to move slowly.

Food and Drug Administration—FDA regulations present a new management problem to the feed industry. Management must learn to live with more government supervision. It may require altered design and equipping of plants and better housekeeping than now exists.

Farm Service Center—This is not a new concept, said Mr. Baker, but it is one that is gaining increasing attention and is expected to catch on rapidly. It offers one-stop shopping for livestock, poultry and crop production supplies. Custom dealers are expected to move more to this.

There will be more custom milling and more grain banking.

Feeding Efficiency—Researchers predict that ruminant nutrition offers the greatest possibility of advances. There haven't been major developments in poultry or swine rations for several years. New approaches, such as liquid feeding, will be tried with varying degrees of success, said Mr. Baker.

End Product Marketing—There will be a lot of activity in this area. Farm customers must have good markets or dealers won't have farm customers. Dealers are expected to take a much more active part in end product marketing.

Personnel—The number of employ-

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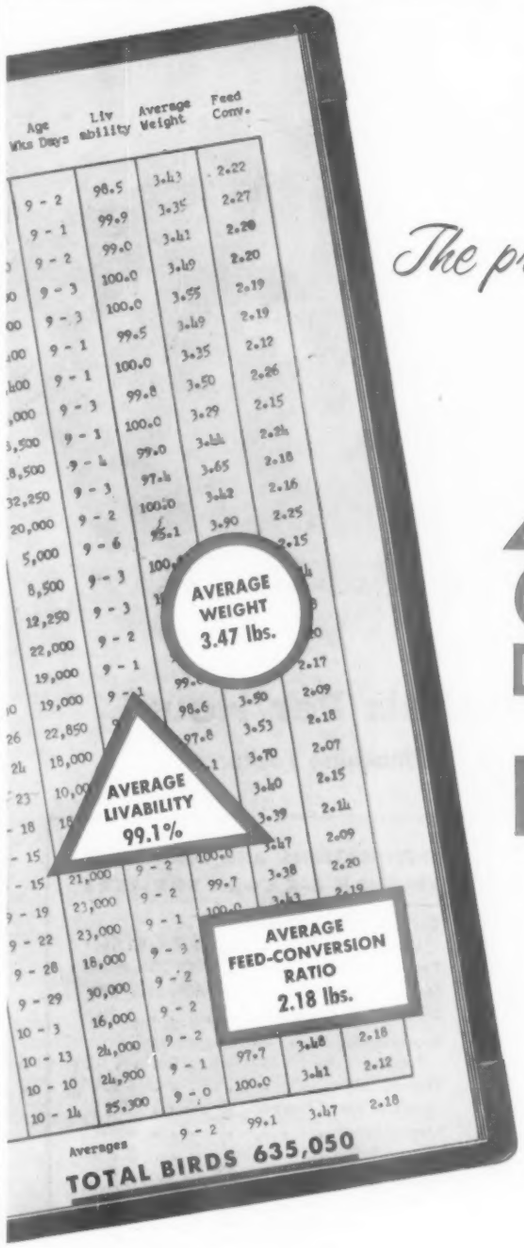

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ees per firm will be relatively few; therefore each individual will have to be well trained for the key position he holds. This will require such skills as business management, sales, feed processing, accounting, public relations, animal production and nutrition, marketing and use of credit. A high school diploma will no longer be sufficient for the responsible jobs in the industry.

Profits—Increased competition will squeeze profits at all levels in the formula feed industry. The marketing trend will be to seek greater volume through lower mark-up and also by shortening the distribution chain from manufacturer to ultimate consumer.

There will be a smaller number of dealers, offering better services and doing a bigger volume.

There has been a 5 to 10% decrease in number of dealers in the last five years, according to association secretaries in several states.

Pacific N.W. Speaker Says Public Relations Is Day-to-Day Job

SPOKANE, WASH.—"Public relations is a day-to-day job and it is everyone's job," Pete Stallcop, executive secretary of the Northwest Country Elevator Assn., told the 40th annual convention of the Pacific Northwest Grain Dealers Assn. here on June 16.

Mr. Stallcop, who served as executive secretary of PNWGDA for 10 years prior to 1956 when he moved to Minneapolis, urged that association members keep the objective "retention of individual liberty and the free market" always in mind.

"Being honest and straightforward in our day-to-day dealings is so commonplace in the grain business we have given little thought to how others look at us," Mr. Stallcop said.

"This oversight has cost us plenty and will continue to cost us if we don't do something about it.

"Isn't it ridiculous, and isn't it tragic, that I can stand here now and say, in the 70th year of operation of our Grain & Feed Dealers National Assn., that it today has the direct membership of less than 15% of the firms in this industry, and a third of that membership joined in the last three months as a result of a concentrated membership campaign?"

Mr. Stallcop cited the pride the industry has in itself, and he bemoaned the fact that this pride has not been passed on to the public.

"What are we proud of?" he asked.

"We are proud of the keen, honorable competition; we are proud of the rock-bottom cost at which the long gap between the producer and the consumer is effectively bridged; we are proud of the integrity of the contracts entered into orally and lived up to universally; we are proud of the fact that we have the oldest voluntary arbitration system in American business; we are proud of the integrity of our warehouse receipts; we are proud that the industry provided the storage necessary to make the price support programs work; we are proud of the leadership our industry has exerted in crop and quality improvement."

Mr. Stallcop also appeared June 15 as a member of a public relations seminar staged by the association's public relations committee, which included a member of the trade, a weekly newspaper editor, a magazine editor and a professional public relations man.

Other speakers on the program were Farnum A. White, deputy director of the Portland commodity office of Commodity Stabilization Service; J. E. Milnes, special agent in charge of the Seattle Federal Bureau of Investigation office; M. S. Ram, chief of the India Supply Mission, Washington, D.C., and Murray M. Moler, space age specialist and intermountain manager for United Press International at Salt Lake City, Utah.

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6-C
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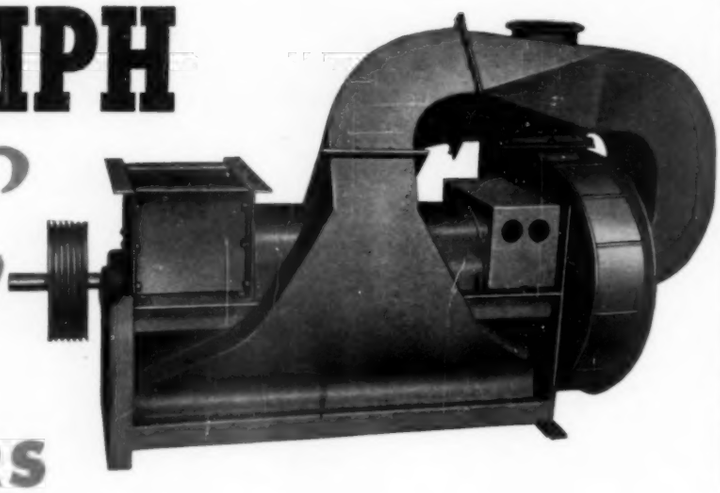

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Overall Height	4'9½"
Height to Top of Hopper	2'11"
Overall Length	8'3¼"
Overall Width	3'2¾"
Weight Skidded for Domestic Shipment	1600 lbs.
Diameter Cob Piping Required	10"
Maximum Vertical Cob Pipe	50'
Maximum Horizontal Cob Pipe	50'

NOTE: No drive pulley supplied except on special order.

*Based on Standard Weight of 70 Lbs./Bu. Ear Corn.

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[1] Patent applied for

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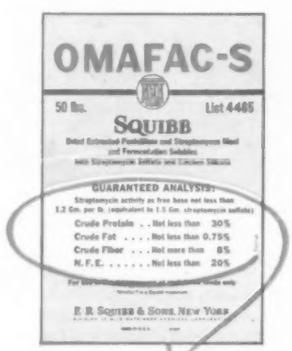
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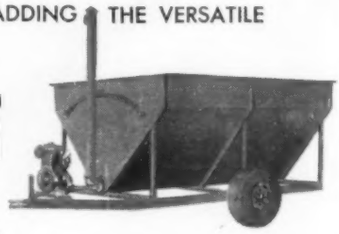
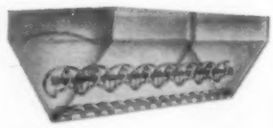


This ruggedly built, all steel Grain Cart is designed for receiving grains from the combine, and reloading into truck or transporting direct to the elevator, unloads up to 20 bushels per minute, saving valuable time in handling. Basic unit has a capacity of 52 bushels but additional panels can be added for a capacity up to 164 bushels. Can be operated from power take off from tractor or run with Gasoline engines.



The Thomas Grain Cart can also be used as mixer. A Ribbon Mixer screw is available as an optional part and can be driven from Power take off or Gasoline engine. Mixes feed either standing still or while being transported to feed lot or feed bins — unloads by vertical screw into bins or direct into feed lot troughs.

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Survey Tells What Feed Men Charge To Deliver Feed

By Al P. Nelson
Feedstuffs Special Writer

When a feed man's truck rolls out of his mill to deliver a 5 or 7 ton load of feed to a customer, do the charges for such delivery pay for the cost of operating the truck?

According to what feed men themselves say, in most cases delivery charges are not sufficient to pay truck operating costs. And one reason why the charges are not sufficient to offset truck costs is because a surprisingly large number of mills do not keep accurate truck cost records. A mill owner may have listed license costs, gas, oil and maintenance costs, but very often no mileages have been recorded.

During the past two years I have asked mill owners in the Middlewest and East (19 states in all) about their truck operation costs, and less than 1% of those I contacted were able to pinpoint such costs. In other words, they just didn't know.

From the statements which owners of small and large feed operations gave me I note that most of the men think, or estimate, that it costs them about 20¢ to 36¢ per mile to operate a bulk delivery truck. The costs vary, of course, depending on whether a firm has a 6-ton capacity, or smaller truck, or a big 12-ton truck.

And when it comes to charges for delivery I found that some firms make no delivery charge for the first 25 miles, while some others charge $2 ton, and have a minimum delivery charge of $2.50 or $3.50. Obviously, with such a variance in delivery charges, some other phase of feed mill operation is bearing part of the feed delivery cost. The situation on feed delivery charges is comparable to the situation in many custom mills. Grinding and mixing charges, for the most part, rarely pay for the labor involved, the power and other costs. The feed man in many cases depends for his profits on the sale of concentrates, complete feed and other merchandise to pick up part of the cost tab on actual grinding and mixing cost factors. And since custom mill charges vary from 5¢ for grinding and mixing to 20¢ cwt., one can easily see how the revenue total varies according to charges.

Why Aren't Rates Higher?

Delivery is costly. Why is it then that so few feed men charge actual delivery costs?

The answer most frequently given is that competition forces a feed mill to keep its delivery charges low. Another answer is that such costs can properly be hidden by other more profitable operations, where a package deal is used.

Some mills are pushing a package deal, that is, a total price for delivered feed, put into farm bins or feeders. In such a transaction the actual delivery cost is hidden, and it is said the farmer does not object to paying such a total price, but he might balk on separated feed and delivery costs.

One eastern cooperative mill, operating a 12-ton pneumatic equipped truck, keeps very accurate records of truck operating costs. Here is a record for a typical month:

Tons of feed hauled (one month)	286
Income earned per mile (based on revenue and tons of feed)	43¢
Operating cost per mile	33¢
Miles traveled	2,279
Net savings per mile (salary and wages amount to 85¢ per ton)	10¢
Gasoline used in one month, gals.	632
Mileage per gallon	4.1

The experienced truck driver who handles this 12-ton unit states that he can unload three tons of bulk feed in 7½ minutes and blow empty. The average delivery stop takes 15 minutes, including setting up. He has unloaded 12 tons at one stop in 45 minutes.

The repairs and service for one year on the above mentioned truck amounted to $211.73, according to the records.

Some feed firms vary their bulk feed delivery charges according to zones, that is, so much per ton for a radius of 15 miles, a higher charge for 20 miles or more. Other feed companies make no zone variation in delivery charges.

"I know we don't charge enough for delivery of feed," reports one feed miller, "and we don't get enough for grinding and mixing—15¢ cwt. But what can we do? If we raise our rates, we lose business. Farmers have their eyes glued on delivery charges and grind and mix rates, more so than on actual cost of a ton of feed. We have to pick up some of these costs on the feed and other merchandise. You show me a better way to do it."

Sampling of Rates

Following are some delivery rates charged by various types of feed mill operations:

- Jackson County Farm Bureau, Seymour, Ind., has a 2½-ton truck and also a 7-ton bulk feed truck. Management has set a minimum delivery charge of $3 for the first 2½ tons; $2 ton is charged for the next two tons, and $1.50 ton for the remainder. On this type of schedule the volume buyer gets a break on delivery.
- Community Feed Mill, Princeton, Ill., charges a straight $2 ton for delivery. "Trucks wear out," says Dexter Obenhaus, owner. "You've got to try to break even on delivery." This firm has two 6-ton delivery trucks.
- Kauffman Feed Mill, Waterman, Ill., charges a straight 15¢ per mile including the return trip mileage. The company uses three trucks in its delivery operation. Management finds that the mileage charge works out well and satisfies most customers.
- Bulk Feeds, Inc., Long Grove, Iowa, a firm which specializes in bulk swine and cattle feeds, uses a package deal charge with the delivery charge included. Farmers seem to be receptive to this practice
- Midland Cooperatives, Inc., Waseca, Minn., charges 50¢ ton for bulk feed delivery. Most customers take sizeable loads. But even at 50¢ ton, many small volume buyers come and call for their own.
- Green Products Co., Conrad, Iowa, charges 50¢ ton delivery, regardless of distance, with a minimum of $1. Here, too, most customers take sizable quantities of feed at one time.
- Russells Co., Hilliards and Fletcher, Ohio, carries a sign on each bulk truck which reads, "Save $21 with bulk feed," thus masking average delivery charges by pointing up to the customer what he saves on a complete load of bulk feed, figuring in his discounts.
- Prairie Feed & Grain Co., Bloomington, Ill., a new firm which has built a very large volume within two years, charges $3 per delivery trip regardless of tonnage ordered. This firm has two bulk trucks of varying capacity.
- Elkhart County Cooperative Assn., Goshen, Ind., makes no delivery charge on feed within 25 miles. Over 25 miles the charge is $2 ton. The firm has two large bulk trucks. Much of the firm's feed volume is delivered

to broiler and turkey growers who are under contracts.

Quite a number of feed mill owners told me that bulk contract haulers charge customers $2-$3 ton regardless of distance. These haulers depend on volume, but some have said lately that they may have to raise their rates.

Picking up grain is another phase of delivery, but it is done with grain hauling trucks, some of which are large. Dealers tell me they charge 3-7½¢ bu. for such pickup for grain bank purposes or for just straight grinding. One Ohio mill charges 22¢ and this includes hauling, grinding and mixing and delivery of finished product back to the farmer.

Maintenance Costs

A deciding factor in truck operating costs is maintenance, including repairs. The feed firm which hires all its service and maintenance is more likely to have higher operating costs than the firm which does all or part of this maintenance.

The Russells Co., Hilliards, Ohio, does a great deal of truck service and maintenance. A separate department rebuilds motors, lubricates trucks, rebuilds truck floors and repairs bodies. Management of this firm says this work cuts down its truck operating costs considerably.

Farmers Supply Co., Avalon, Wis., operates 11 trucks, including a 7-ton bulk truck and a number of smaller trucks. The feed firm does the greasing and changing of oil and also makes minor mechanical repairs, thus cutting down on costs, says the owner.

Porter's Feed Store, Fort Dodge, Iowa, has a mobile milling service and the firm also hauls feed for its own use and feed for dealers over a wide area. There's a well equipped garage, 30 by 65 ft., adjoining the feed store. Here the firm's 20 vehicles are serviced. They include three 6-ton bulk trucks, three 12-ton auger trailers, one 8-ton auger trailer and one 18-ton auger trailer.

"By doing all our maintenance on trucks we can keep our units on the road at all times and in good order," states Glenn Porter. "And we are doing it at lower cost than if we hired all this work."

Large Trailers Used

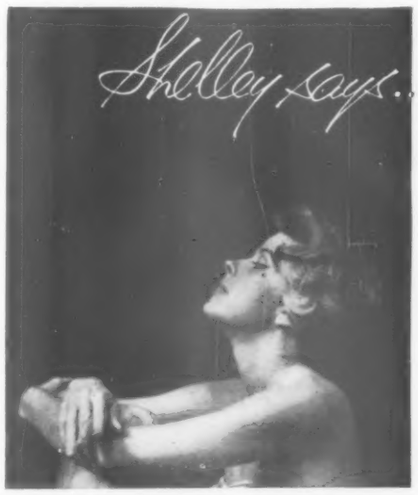
Some feed firms, too, have large trailers which they use to haul feed and grain from considerable distances. One Wisconsin dealer who recently put up five metal storage tanks to hold concentrate, bought an 18-ton capacity semi-trailer which he uses to haul concentrate from Minneapolis, a distance of 275 miles. He also uses this trailer to haul shelled corn from Illinois and Minnesota to his corn deficient area. He does not hesitate to make trips of 300 miles each way, and he says he saves transportation costs by using such a trailer. He and his mill men service his truck equipment, but a local garage handles major repairs.

"The feed industry is on wheels today," says one mill owner. "We added a mobile mill to our stationary setup, and we have two delivery trucks. To keep these units moving costs us a lot of money. We are now starting to make detailed records of our costs of operating those trucks. Our findings will greatly affect our charges for milling and delivery."

There are also other costs involved besides gasoline, licenses, grease, oil, repairs, insurance and depreciation in operating a truck. Many feed ttrucks get stuck in farmyards and feedlots delivering feed. Sometimes a driver may have to wait half an hour to two hours before the farmer can pull him out with a tractor or until the home base sends another truck.

Mishaps like this cause loss of time and are hard on truck motors. Coupled with this are the varying efficiency performances of drivers. Some drivers can get better mileage out of delivery trucks and handle motors and brakes much better. All this affects cost and life of a truck.

Feed men, due to increasing competition in the industry, are being forced to pay more attention to truck operating costs and to efficient truck handling. Truck costs are a sizable part of almost every mill's expense. Many mill owners say that when they get their delivery and truck maintenance costs pinned down, they'll be able to adjust charges to at least a break-even point to keep feed rolling out to farms which they serve.



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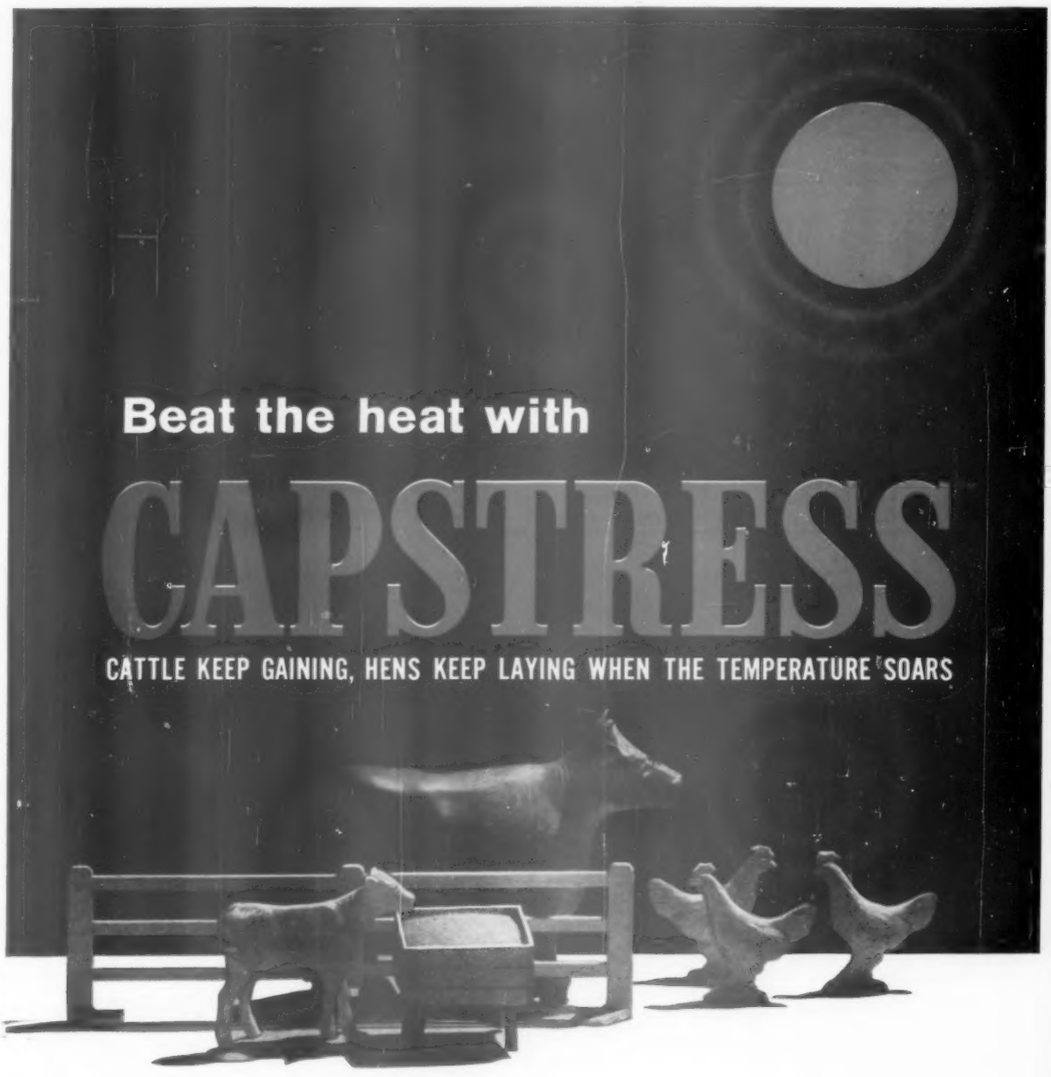

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Kansas Feed Grain Bank Operations

"A firm planning a grain bank should consider what it and what the customers expect. Policies should be written so both customers and employees understand the program. The firm should have an adequate accounting system and be certain that the operation complies with warehousing laws. It is important to any firm that customers have confidence in its grain bank program."

By Richard J. Herder
Kansas State University

This study was undertaken to increase the knowledge regarding practical operating procedures and problems of grain bank feed merchandising. Previously, only limited information was available. In this study data on the actual operations of a number of grain banks were collected and analyzed. The study was (1) to provide information to feed dealers to enable them to evaluate their present grain bank methods and (2) to outline to prospective grain banks the procedures involved in running a bank. The survey was also useful in pointing out the problem areas in grain banking, especially those peculiar to Kansas firms.

This report summarizes the information gained in the survey. It does not present recommended practices. Individual firms must adapt grain banking to their own circumstances.

Since the number of grain banks in Kansas is growing, their exact number was not known. Forty-five firms operating grain banks provided data for this study. Though not chosen randomly, the banks are scattered throughout the state and appear to be fairly representative for Kansas.

EDITOR'S NOTE: The accompanying article is from a Kansas State University bulletin by the same title. The bulletin is No. 431 and is contribution No. 344 of the department of agricultural economics, Kansas Agricultural Experiment Station, Manhattan, Kansas.

Grain storage capacities for the 45 firms ranged from less than 100,000 bu. to over 1,000,000 bu. While most maintained a flexible policy on the amount of grain placed in the bank, the space allocated to the bank was generally small relative to total space. The typical firm stored between 20,000 and 40,000 bu. in the bank. A few smaller elevators used most or all space for grain banks.

All surveyed firms were equipped for custom feed milling operations. Daily feed milling capacities ranged from less than 20 tons to over 100 tons. Twenty-eight had daily capacities of 20 to 50 tons. Most of the custom milling was for non-bank patrons. Four of the banks estimated that over half of their milling was on bank accounts and 19 estimated that less than one fourth was for bank customers. The size of feed orders from banks' customers varied. Largest orders were around 5 to 7 tons from most banks. Smallest were from ½ to 1 ton. Grain bank customers' average orders were 2 to 3 tons.

The number of grain bank customers was small relative to total customers. Bank customers per firm ranged from less than 10 to over 200 which, for the most part, represented less than 25% of total customers (Table 1). One firm did all of its milling business on a grain bank basis. The amount of grain stored by bank users ranged from 250 bu. to over 1,000 bu. per customer. Over half of the banks expected more than 100 customers each in the next five years.

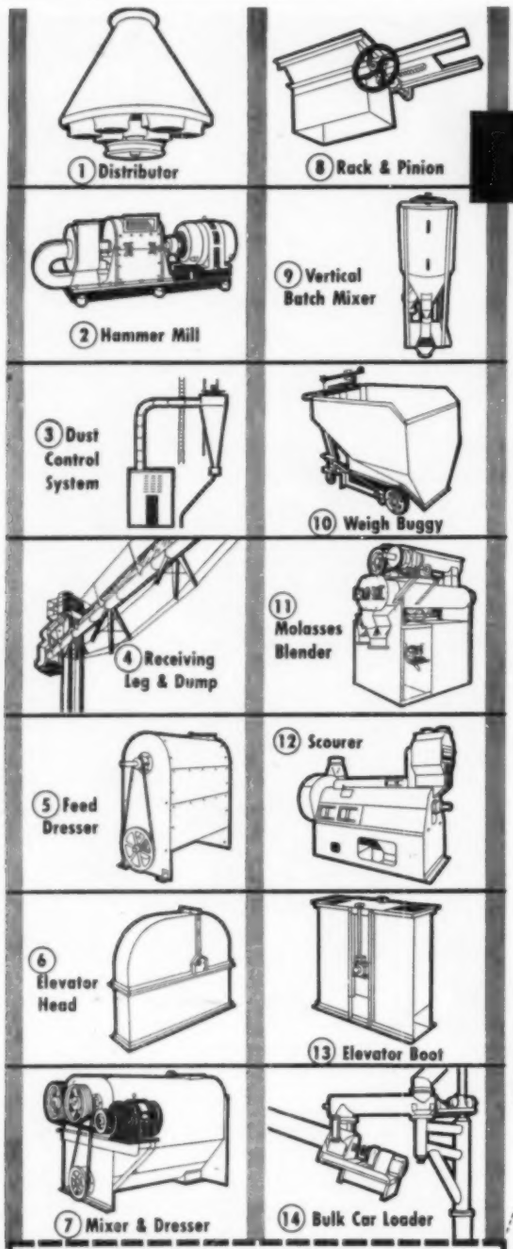
Thirty-three banks had been in operation for three years or less. Only 10 had formal policies setting forth bank rules and procedures available to customers. The rest had informal agreements with customers or were able to control their operations so that specified requirements were unnecessary.

The majority of the firms thought that grain banking would expand to include more customers and greater participation by present customers. Thirteen were uncertain as to the future and seven expected no change in their grain bank operations.

OPERATING PROCEDURES OF GRAIN BANKS—Grain Receiving—Over half of the 45 banks surveyed provided storage for each of four grains: corn, sorghum grain, oats and barley. Two excluded sorghum grain and five oats and/or barley. Thirteen did not handle corn. Three of the banks limited deposits to only one grain, usually sorghum grain or corn. The general practice was to accept only those grains that met present feed mill standards. Usually the grains had to meet the minimum requirements for No. 2 grade. Maxi-

TABLE 1. Frequency Distribution of Bank Customers Per Firm, 45 Kansas Grain Banks, 1960

No. of customers per firm	No. of firms
10 or less	7
11-25	9
26-50	11
51-100	8
More than 100	6
Unknown	4



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mum moisture content ranged from 13 to 15% (Table 2). A few banks did not specify standards or used the local crop average as a standard.

Most of the banks would condition grains that failed to meet bank standards. Twenty-six banks maintained drying facilities and two planned to install them specifically for grain bank purposes. Grain depositors were charged the firm's usual drying fee and weight discount. Adjustments were often made, based on market price differentials, for upgrading grain. Grains that could not be conditioned were always unacceptable for bank storage.

Twenty-three grain banks made no charges for handling grain. Thirteen charged from 2 to 5¾¢ per bu. for handling. Seven charged from 1 to 6¢ cwt. Two based handling charges on the current Uniform Grain Storage Agreement (U.G.S.A.) rates.

Grain Bank Storage—Various methods were used by banks to determine storage charges. Seven banks made no charge but restricted the amount of gain stored per customer. The current UGSA storage rate was used by 13 of the firms. While the remaining firms used different methods of computing charges, most had specified rates in cents per bushel or per hundredweight. A few banks allowed free periods, typically 30 days, before charges were made. Two of the banks charged for storage, depending on length of storage. Two others waived charges if the grain was processed.

Shrinkage discounts were deducted by many of the banks. Discounts were used separately or combined with regular storage charges. A 1% discount was typical although one bank discounted bank grain 3%. Five of the banks used the discount only and nine combined discounts and regular rates.

Limiting the maximum amount of grain per customer was also used. Twenty-one used this method. It was usually combined with storage charges and/or discounts. The restrictions ranged from 200 bu. of grain per customer to 5,000 bu. total per customer. The commonest was 1,000 bu. A few banks made limitations on the basis of estimated feed needs of customers. Minimum storage requirements were imposed by four banks. Three required at least 100 bu. and one 1,000 bu.

TABLE 2. Number of Firms Specifying Minimum Grade and Maximum Moisture Requirements for Acceptable Grains, 45 Banks, 1960

	Corn	Sorghum grain	Oats	Barley
Minimum grade				
No. 1	0	0	7	0
No. 2	24	34	20	23
No. 3	4	6	3	7
No. 4	0	0	0	3
Crop average	0	1	0	5
Not specified	3	3	1	1
Total	31	44	31	39
Maximum moisture				
12%	0	0	5	3
12.5%	1	1	0	0
13%	7	17	12	17
14%	11	15	9	12
15%	8	5	1	1
16% up	1	2	0	0
Crop average	0	3	0	4
Not specified	3	1	4	2
Total	31	44	31	39

Two of the 45 surveyed banks segregated bank grain from other stored grain. The rest commingled bank grain with open storage grain. Eight banks would not allow unprocessed grain to be withdrawn. Twenty-three charged additional handling fees on withdrawn whole grain. Fees were cents per bushel or hundredweight and were in addition to the regular handling charge.

Overdrawals were handled in various ways. Seventeen banks made an immediate charge based on the market price of the amount of grain overdrawn. These 17 did not allow a customer to carry a deficit balance. The rest provided for grain replacement by the customer. Two required that replacement be in 10 days, two in 14 days, and 24 did not specify replacement time.

Five of the banks requested that customers make advance commitments for storage space. Six requested that grain deliveries be made at arranged times. These rules, however, were not generally enforced and al-

(Turn to GRAIN BANK, page 86)

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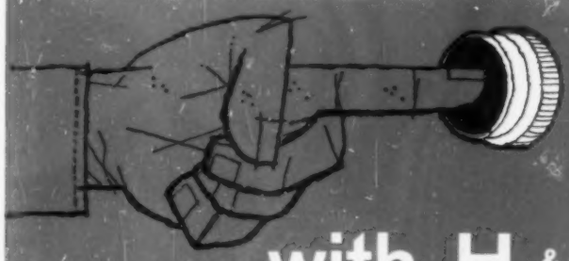

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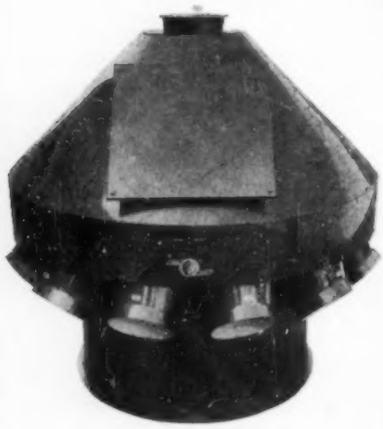

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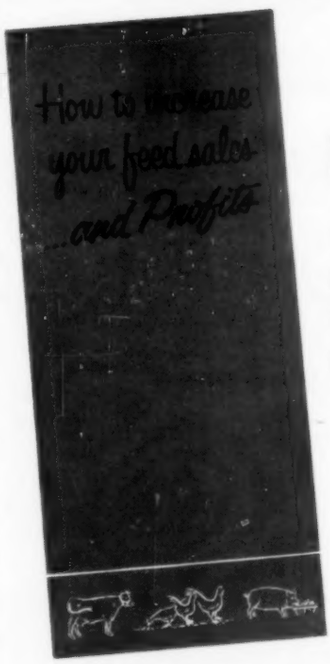

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APHF Announces Educational Topics For July 18-20 Event

KANSAS CITY — Prevention and control of poultry infections, flock management, poultry and egg marketing and many other topics of interest to representatives of the nation's poultry industry will be afforded attention during the educational program of the July 18-20 American Poultry Congress & Exposition in Minneapolis.

A general session scheduled for the afternoon of Wednesday, July 19, will be devoted to a clinic where participants will consider steps hatcherymen can take to help prevent or control poultry diseases which cause excessive losses in broiler and layer flocks, the American Poultry & Hatchery Federation, Kansas City, announced.

Dr. Ben Pomeroy, head of the division of veterinary bacteriology and public health, University of Minnesota, will be in charge of this clinic. Other specialists who are to take part include: Dr. V. W. Greene, school of public health, University of Minnesota; Dr. H. L. Chute, pathologist in the animal pathology department, University of Maine; Dr. J. R. E. Taylor, DeKalb (Ill.) Agricultural Assn.; Dr. O. H. Peterson, Dr. Salsbury's Laboratories, Charles City, Iowa, and Dr. P. P. Levine, pathologist, Cornell University.

Dr. Pomeroy will outline procedures to be followed by hatcherymen in fumigating hatching eggs prior to incubation, a practice which is becoming widespread in the turkey industry and is now strongly recommended in the preparation of chicken eggs for hatching as an effective tool in controlling paratyphoid and paracolon infections and omphalitis.

Drs. Peterson and Taylor will describe recent progress in the development of a vaccine to prevent epidemic tremors; the practice of dipping hatching eggs in antibiotics as a PPLO control measure will be discussed by Dr. Levine, and Dr. Greene's presentation will be concerned with an "early warning system" for prevention of bacteria-type diseases in hatcheries.

The clinic will be continued as part of another general session Thursday morning, July 20, when Dr. Chute is scheduled to tell about a program which will be started in Maine in an effort to create a "disease-free" poultry area.

A portion of the educational program for the American Poultry Congress & Exposition in Minneapolis will be under the auspices of the National Egg Council.

Thursday afternoon, Carroll Eiler, NEC president, and William McKay, NEC second vice president, will interrogate panelists to uncover answers to the question, "Where Do You Fit in Tomorrow's Specification Egg Market?" Questions will be directed to Ralph Johnson, Norfolk, Neb., who is in charge of all egg procurement for Henningsen, Inc., and Harold Mallon, Mallon Poultry & Egg Co., Fairmont, Neb.

"Barrier to Midwestern Egg Producer Progress" is the subject chosen for an address to be given by Leonard Eggleton, poultry extension specialist, Iowa State University.

Also on the docket for Thursday morning is an analysis of broiler growing in the Upper Midwest by Emil Johnson, manager, Armour & Co., St. Cloud, Minn.

More than 4,000 poultrymen, breeders and hatcherymen are expected to attend the national event which will open Tuesday morning, July 18, when the exhibit hall of the Minneapolis Civic Auditorium opens. L. M. Manford, Nixon, Texas, president of the American Poultry & Hatchery Federation, will call the convention to order at 2:15 p.m. July 18.

Organizers said the displays of 172 commercial firms will cover more than a city block of space. One of the displays, "Automation for Profitable Egg Production," will feature actual equipment installations for four different flock size situations. Dr. Glenn Bressler, Penn State University authority on poultry housing, will speak several times daily from the site of the exhibit, which will be brought to Minneapolis under the sponsorship of the American Poultry & Hatchery Federation and Poultry Industry Manufacturers Council.

In conjunction with the American Poultry Congress, the Midwest Goose Growers Assn. will conduct its annual convention in Minneapolis July 19 and 20 in a meeting room at the auditorium.

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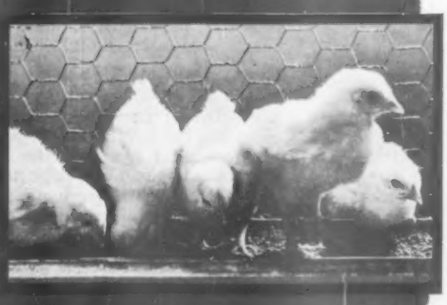

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FEED CONTROL COMMENT

By BRUCE POUNDSTONE
Secretary, Association of American Feed Control Officials
Kentucky Agricultural Experiment Station, Lexington

Labeling Ethoxyquin

In October, 1959, Monsanto Chemical Co. coined a new generic name, "ethoxyquin." The chemical name for this product is "1,2-dihydro-6-ethoxy-2,2,4-trimethylquinoline."

Earlier that year, deputy commissioner of the Food and Drug Administration, John L. Harvey, set forth a procedure for the development and use of "a new commonly accepted name." The development and use of the term ethoxyquin illustrate the way in which new names can come about and the long chemical names finally dropped from ingredient lists.

Previous to the establishment of the name ethoxyquin, this product was referred to on feed tags by the long chemical name. With the introduction of ethoxyquin as a shorter term, and since October, 1959, this ingredient has been listed on tags as "Ethoxyquin (1,2-dihydro-6-ethoxy-2,2,4-trimethylquinoline)."

Commissioner Harvey said in 1959 that "as soon as there was reasonable association between the adopted name and the product, the parenthetical jawbreaker can be dropped." He indicated further that this need not take a long period of time.

Long Name Dropped

At the time of the meeting of the American Feed Manufacturers Assn. in Chicago last May, Ralph Kneeland of FDA, announced that the chemical name no longer need appear in the parenthetical part of the expression and that from now on ethoxyquin would be sufficient. Monsanto had petitioned FDA to this effect late in 1960.

This transition illustrates the process by which names are evolved and developed to "common or usual" status. It also is timely because alfalfa dehydrators propose to use ethoxyquin extensively in dehydrated alfalfa meal derived from the 1961 crop. By dropping the long chemical name this will greatly simplify the labeling of such alfalfa meal and mixed feeds containing dehydrated alfalfa meal with ethoxyquin.

What's to Be Done?

Questions are coming in to control offices asking what is to be done.

In the case of alfalfa meal, "preserved with ethoxyquin" or some similar statement is required. Alfalfa meal treated with ethoxyquin in a mixed feed would appear on a mixed feed tag as "dehydrated alfalfa meal with ethoxyquin, a preservative" or some other similar statement.

Ethoxyquin, when added to a mixed feed and not a part of the alfalfa meal, would appear as the last ingredient in the list of ingredients as "ethoxyquin, a preservative," or some similar statement.

Further question has been raised as to how quickly companies should be expected to change their labeling to conform to this. Some companies now have tags printed showing ethoxyquin followed by the chemical name. No change is needed here. When new tags are printed the chemical name may be dropped.

May Need New Tags

Other companies may not have been using ethoxyquin-treated alfalfa meal and thus their tags do not show ethoxyquin. The fact that ethoxyquin will now appear in practically all dehydrated alfalfa meal means new tags must be printed. Labels should be changed as soon as the ethoxyquin treated alfalfa meal is received. Amendments to present registrations should likewise be made.

Control officials and industry representatives alike look upon this new development as further indication that modifications are possible in labeling procedures and names of products. This is one of the first developments of this kind since Mr. Harvey discussed the subject at the American Bar Assn.'s annual meeting in Florida in 1959.

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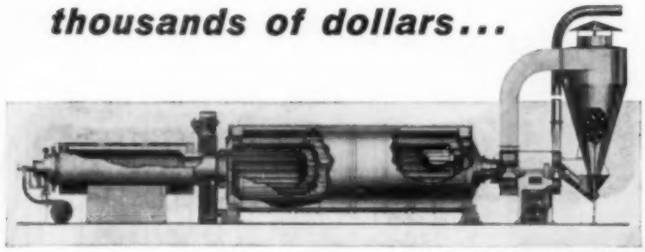

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Offers Service Program

SILVER CREEK, N.Y.—As part of its customer service program, the S. Howes Co. of Silver Creek is offering a new service to owners of Eureka grain cleaners. A factory serviceman visits each customer on a prearranged date and performs a complete check-up and adjustment procedure.

According to George R. Willis, vice president of sales for S. Howes, the program is designed to accomplish two basic objectives. First, he said, is "preventive maintenance" by helping users put their grain cleaning equipment in top operating condition, ready for the efficient and profitable handling of this year's grain crop. Secondly, it enables grain processors to meet the purity standards for grain set up by the Food and Drug Administration.

In addition, S. Howes service personnel instruct employees in the customer's plant in the proper operation and maintenance of Eureka grain cleaners. S. Howes dealers are advised in advance when this service is available in their respective areas.

Use Feedstuffs WANT ADS for RESULTS

Coordinated Beef Conference Planned

FT. COLLINS, COLO.—July 7 and 8 nearly four dozen of the nation's top ranchers, feeders and beef cattle scientists will consider what it will take to produce tomorrow's efficient, practical and profitable beef animal.

The event will be the first Coordinated Beef Improvement Conference, initiated and sponsored by the American National Cattlemen's Assn., American Society of Animal Production and Colorado State University.

Nearly 400 stockmen are expected to attend the sessions on the campus of Colorado State University, according to the announcement from the American National Cattlemen's Assn. in Denver.

Charles Quarre, Bakersfield, Cal., cattleman, will be chairman of the conference which has been planned to include a minimum number of speeches and a maximum number of work sessions and presentations of research findings and practical observations by 44 industry representatives.

The only formal talks will be given by Clifford Hansen, Jackson, Wyo., rancher, who is chairman of the Livestock Research and Marketing Advisory Committee to the U. S. Department of Agriculture, and Dr. A. E. Darlow, dean of the College of Agriculture, Oklahoma State University, Stillwater.

Welcoming the participants will be CSU officials; Dr. H. H. Stonaker, president of American Society of Animal Production, and Fred H. Dressler, Gardnerville, Nev., president of the American National Cattlemen's Association.

A workshop session on "Improvement Through Feeding" will have Robert Beechinor, Bakersfield, Cal., feeder, as its chairman. Those presenting papers will include: Dr. Bruce Taylor, head, animal husbandry department, University of Arizona, Tucson; Jack Algeo, nutrition consultant, Solvang, Cal.; Ray Baxter, feeder, Grand Island, Neb.; Paul Blackman, Acme Meat Co., Los Angeles, Cal.; W. D. Farr, Greeley, Colo., feeder; Dr. W. M. Beeson, animal science department, Purdue University, Lafayette, Ind.; Cecil Hellbusch, agricultural representative, Safeway Stores, Inc., Denver, and J. C. Wetzler, Phoenix Ariz., chairman of the American National's Feeder Committee.

A reception July 6 and a luncheon and buffet supper July 7 are planned. Housing in university dormitories and Fort Collins hotels and motels is being handled through Dudley T. Campbell, secretary, American National Cattlemen's Association, 801 E. 17th Ave., Denver 18, Colo.

LOCATION CHANGE

LITTLE ROCK, ARK. — The Arkansas State Plant Board, which has long been an important factor in the feed and chemical business in Arkansas, has moved its offices and laboratories from 506½ Center St. to 421½ West Capitol Ave. here. Robert W. Anderson, chief inspector, said that the chemical laboratories will be at 915 E. 2nd St. in Little Rock's commercial district.

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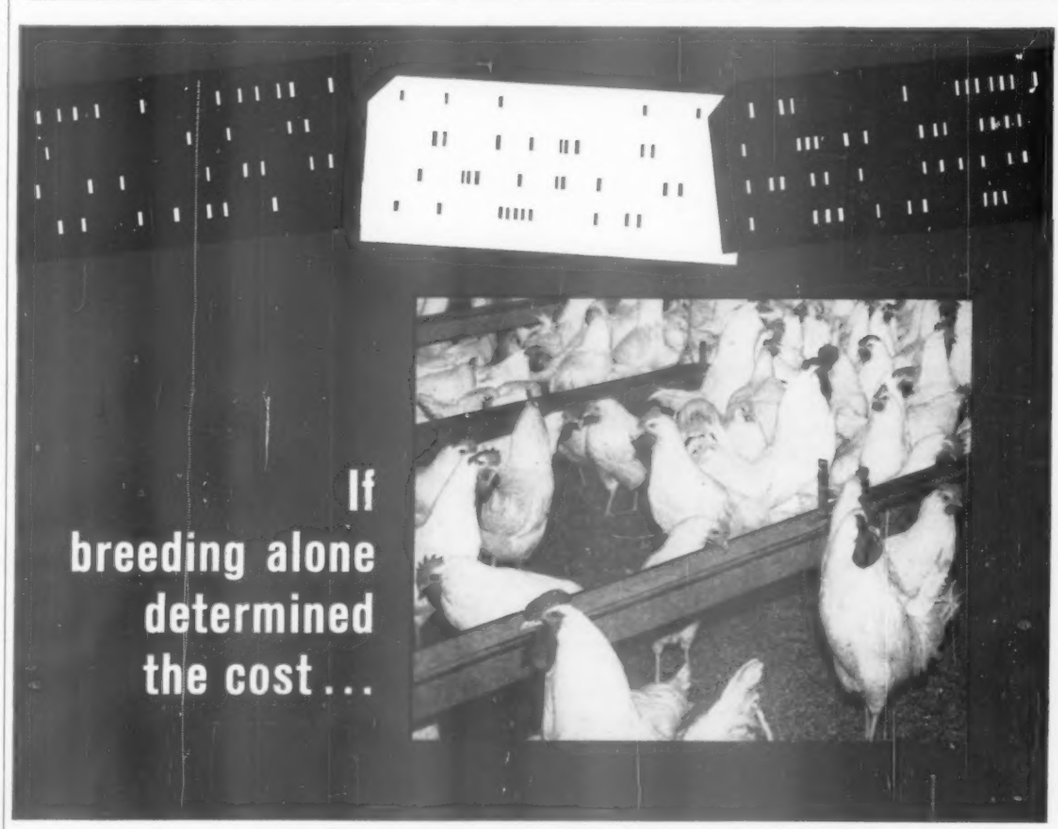

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In five recent Random Samples Arbor Acres Queens outperformed the other six leading white egg layers. Ahead in average income and in average production per pullet housed, they were well above average in livability and feed conversion. In egg quality they produced their usual outstanding results: the strong interiors and tough, even-textured shells handlers are looking for. What's more, *these Queen entries were not experimental crosses but the same strain cross you can buy right now.*

To develop commercial layers like these required a proven breeding program. This costs a lot of money. Breeding, however, is not the only cost in a pullet. There is always the cost of distribution which has nothing to do with increasing your profit. So we found a way to distribute more efficiently. We already maintained our own farms in every important egg-producing area with plenty of room for strain cross breeder flocks. With these we eliminated much of your hatcheryman's overhead. He saves and passes the saving along to you. The way today's Queen is performing you're still ahead at housing time and throughout the laying year. Does it make sense to pay more for your replacements when there's an Arbor Acres Queen hatcheryman nearby? Better call him right away.

Arbor Acres

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THE AWESOME-looking instrument in the picture above is an electron microscope. Through it, a cancer researcher can observe the detail of a cancer cell—magnified 100,000 times.

The microscope costs $35,000 and was paid for by American Cancer Society funds—which support 1300 scientists, all working to find the cause of cancer, and its prevention.

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AIRSACCULITIS IN TURKEYS

"Condemnations from airsacculitis will decrease, if everyone—the breeder flock owner, the hatcheryman, the grower—does a better job of housekeeping. The feed industry stands in a good position to encourage the turkey industry to do a better job."

By Dr. B. S. Pomeroy
University of Minnesota

Since last fall the problem of airsacculitis in turkeys has been emphasized by the increased condemnations in processed poultry. Beginning Oct. 1, the Poultry Inspection Service identified condemnations from respiratory infections specifically as airsacculitis rather than under a broad term of septicemia and toxemia or inflammatory process. This change helped to pinpoint the importance of this problem.

During October, November and December, 1960, more than 15 million chicken and turkey carcasses were condemned because of airsacculitis in the U.S. In Minnesota the turkey industry was severely hit. In the month of October there was a 500% increase in total condemnations of turkeys.

What is meant by the term airsacculitis? It is a term used by the Poultry Inspection Service to designate infection of the lungs and air sacs, and it does not indicate the cause of the condition.

What are some of the known diseases that will involve the air sacs and result in the condition known as airsacculitis? They are: (1) infectious sinusitis, (2) ornithosis, (3) Newcastle disease, (4) aspergillosis, (5) fowl cholera and (6) colibacillosis. There may be other agents associated with this condition that have not been identified. Future research work will tell the complete story.

EDITOR'S NOTE: *Dr. Pomeroy, head of the department of veterinary bacteriology, University of Minnesota Institute of Agriculture, has been for some time a source of knowledge related to disease-caused condemnations of turkeys. This discussion of a subject he knows thoroughly appeared in Minnesota Feed Service, published by the University of Minnesota Agricultural Extension Service.*

Some Egg Transmitted

There are certain of these diseases that are egg transmitted. There are other diseases that may be transmitted at the time of hatching, and still other conditions are contacted on the farm. Certainly egg transmission is not the only way an egg transmitted disease may spread from farm to farm. Infectious sinusitis is an egg transmitted disease. However, it may be introduced into a farm by other means. Contaminated poultry crates, carrier birds and visitors may introduce the infection into a healthy flock.

At the present time, ornithosis is not considered an egg-transmitted disease. There is evidence that this condition is widely distributed in our turkey population and under rare instances manifests itself into an acute infection of the air sacs and other visceral organs such as the liver and heart.

Newcastle disease has been a problem in Minnesota since 1946. Primarily, this disease is not considered to be egg transmitted, but on occasion the infection may be introduced into a brooder room of a hatchery and be distributed from that point. More often, Newcastle disease is introduced into a turkey flock from carrier birds, contaminated poultry crates, equipment and visitors, or it may be air borne.

Aspergillosis, fowl cholera and coli-

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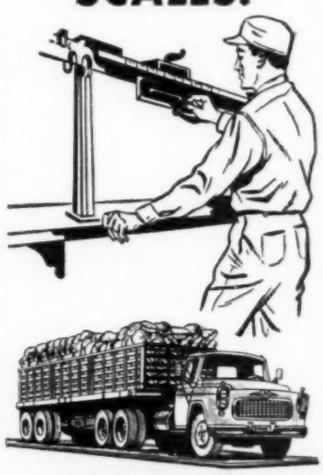

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form organisms are not considered to be egg-transmitted diseases. Aspergillosis and coliform organisms may contaminate the hatcher, and the poults will be exposed at the time of hatching. But more than likely these infections may be picked up on the farm.

As stated earlier, infectious sinusitis is an egg-transmitted disease. It occurs in two forms. One form of the disease involves the sinuses or upper respiratory tract. The second form may involve the lungs and air sacs. Some birds may have an infection involving both the upper and lower respiratory tract, or it may involve only the sinuses or the lungs and air sacs.

The key to the control of infectious sinusitis involves cooperation between the breeder flock owner and the hatcheryman. In addition to recognizing that the disease is egg transmitted, it must be noted that antibiotics will not completely eliminate the egg transmission whether they are injected or used in the feed.

There is a voluntary unofficial program in Minnesota available to reduce the hazard of infectious sinusitis. This program is supported by the Minnesota Turkey Growers Assn. and participating hatcheries and breeder

(Turn to page 64)

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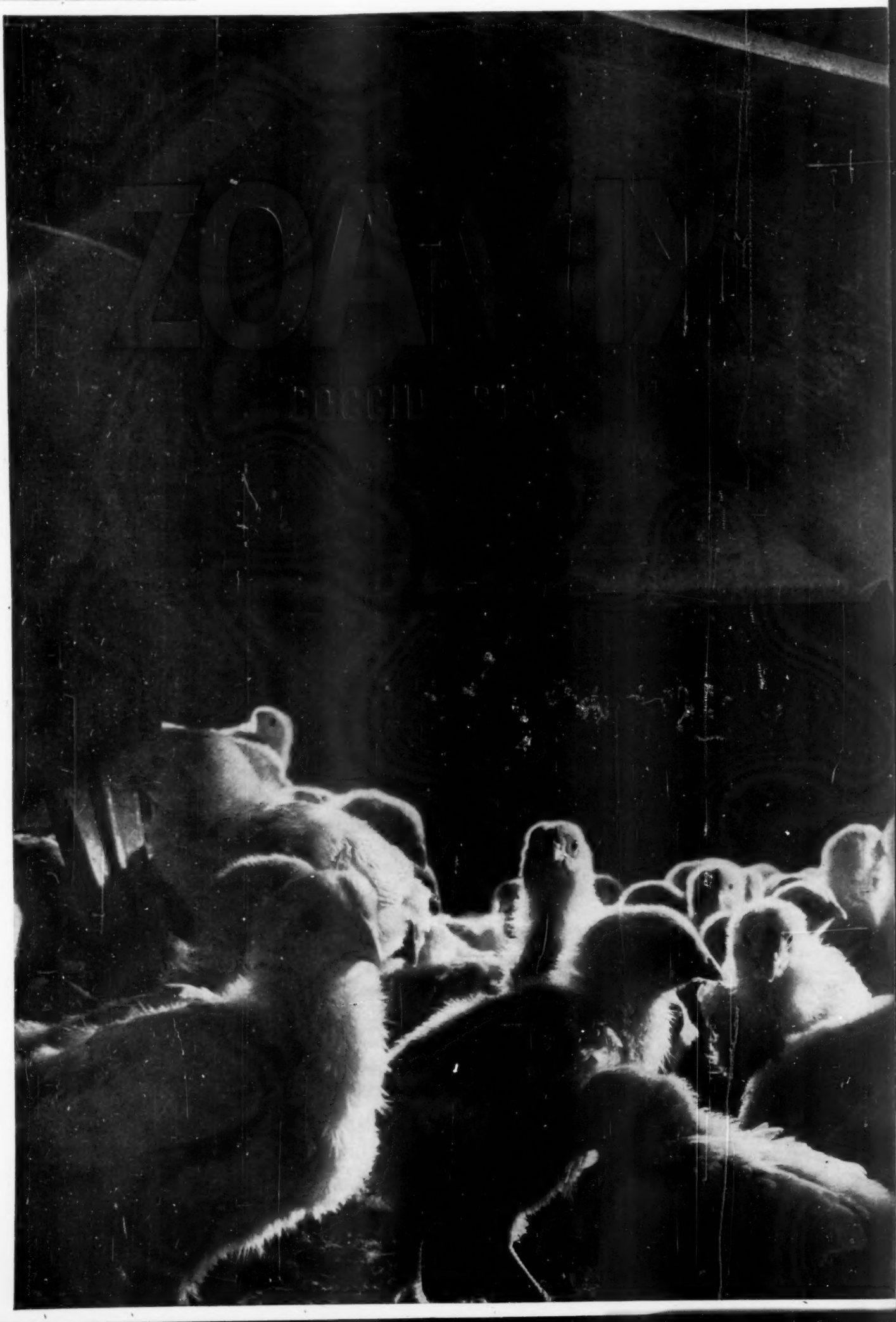
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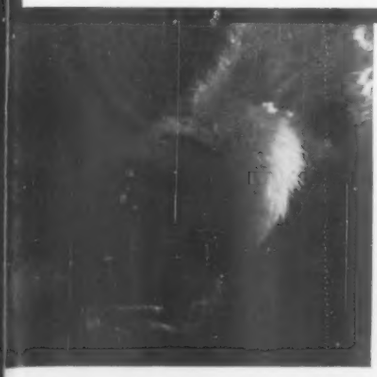
1-Minute Test for Zoamix. Simple test enables serviceman to make on-the-farm or in-the-plant check for presence of our coccidiostat in feed. For further information, contact your Dow sales representative.

Polyethylene Boots. Disposable, polyethylene pull-on boots available to feed company servicemen. Helps prevent spreading disease and protects shoes. 25 pairs to a roll. See your Dow representative for details.



Free educational film. "Chemicals: Vital to Our Food Supply," a 22-minute sound and color story of the contributions of chemicals to mankind, is now available for screening or group showings. Film has many references to the poultry industry. For bookings, contact your Dow Feed Industry Sales representative.

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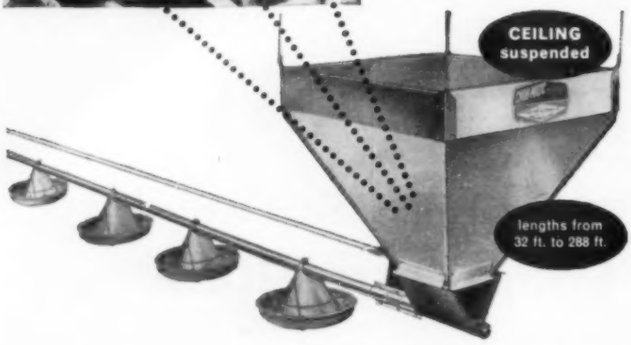
CHORE-MATIC



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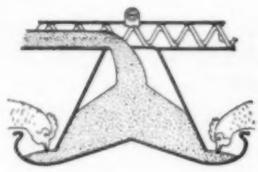
enclosed auger conveyor fills each pan with fresh feed ...eliminates pick-over

CHORE-MATIC'S spring type auger fills each pan in succession with fresh feed from the hopper. As the birds lower the feed level, the auger is automatically started, keeping the pans filled with new feed. There's no dirty picked-over feed at the end of the line. Every bird gets nourishing, clean feed.



- Enables birds to move freely around pans and under conveyor, no hopping over . . . no bunching up.
- Round feeder pans allow up to 20% more birds at feeder space per foot of line.
- Ceiling suspended . . . adjusts vertically for birds of all ages.
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flocks received no official classification.

Selection pressure on the breeder flock is most important. It is recommended that breeder flocks be selected from flocks that have shown no clinical signs of sinusitis and air sac infection during the brooding and growing season.

After the breeder flock has been selected from a flock that has a good history, the flock may be tested with a PPLO antigen (the cause of infectious sinusitis is a pleuropneumonia-like organism, PPLO). At present, the plan for this coming season is to test 100% of the flock at the time it is tested for pullorum disease. If reactors to the test are found, the birds are submitted to the diagnostic laboratory for examination.

Final recommendations as to whether the flock is kept or marketed are based on the examination of the lungs and air sacs and recovery of the PPLO from the tissues. If the hatcherymen and breeder flock owners select their supply flocks on this basis, they have applied all the facts that are available in determining if a flock is infected or free. The infected flock must be eliminated. There can be no compromise.

Vaccination Program?

Can the diseases that are associated with airsacculitis be prevented by a vaccination program?

There is no vaccine available for infectious sinusitis. However, certain antibiotics such as streptomycin, tetracyclines and erythromycin are effective in treating individual birds. Also a potentiated feeding program has value in reducing the severity of the disease. There is no vaccine available for ornithosis, but certain antibiotics such as tetracyclines and erythromycin are highly satisfactory in treating this disease. There is a highly effective vaccination program available for Newcastle disease.

Aspergillosis is not susceptible to the various drugs and may be prevented by adhering to a strict sanitation program. Recent developments indicate that an effective vaccine has been developed for fowl cholera.

Probably the most common organism that is associated with airsacculitis as a secondary invader is E. coli. This organism is usually responsible for the death losses that may occur in an outbreak of infectious sinusitis. Undoubtedly future research work will find new agents associated with airsacculitis.

Condemnations from airsacculitis will decrease if everyone does a better job of housekeeping—the breeder flock owner, hatcheryman and grower. The feed industry is in a position to encourage a better job by the turkey industry.

FEEDER REPORTS

FT. WORTH—The new feeder division of the Texas & Southwestern Cattle Raisers Assn. has instituted a service which provides confidential reports to feeders.

A traveling salesman walked into a restaurant one morning and told the waitress, "Bring me two eggs fried so hard they are edged in black, two slices of burnt toast and a cup of cold coffee. Then sit down and nag me—I'm homesick."

◆ ◆ ◆

Eskimo Boy: What would you say if I told you that I drove 1,000 miles on my dog sled to see you?
Eskimo Girl: That's a lot of mush.

◆ ◆ ◆

A Chicagoan, an Ohioan, and a Texan died, and all were scheduled for cremation on the same day.

The Chicago man was cremated first, and when his ashes were removed, they were put into a quart jar. The Ohio man was next, and his ashes required a pint container.

The Texas man was last. After 15 hours, the furnace door was opened. Out walked the Texan, mopping his face with his handkerchief.

"Boy," he said, "if we get two more days of this hot weather, it'll ruin the cotton for sure!"

◆ ◆ ◆

Speaker: "Thank you, sir, for staying to listen to me when everybody else walked out."
Listener: "Don't thank me. I'm the next speaker."

◆ ◆ ◆

"He's a psycho-ceramic."
"What's that?"
"A crackpot."

◆ ◆ ◆

Mr. Green: "Do you mean to say they put him in jail for something he didn't do?"
Mr. Brown: "Yeah . . . he didn't pay his income tax."

◆ ◆ ◆

A motorist travelling through the backwoods of Kentucky pulled up at a general store to ask one of the natives sitting on a tilted chair out front, the way to Louisville.

"Wal," says the hillbilly, "You keep on the way your a goin' until you come to a . . . naw, that ain't right. Lessee . . . you go back this here road till you git past . . . naw, that ain't right neither." The hillbilly scratched his head reflectively a few moments more. "Gol dang it, mister . . . you cain't git to Louisville from here."

Best Meal of the day

Yours, when its formulated with Sunflower Brand soybean meal! Item: Sunflower Brand starts with the *best* soybeans grown. Item: we "cook" them by a special process to develop highest palatibility and digestibility. Item: Guaranteed OVER 44% protein. Get the complete story from:

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Phone Dickens 2-7270 Emporia, Kansas

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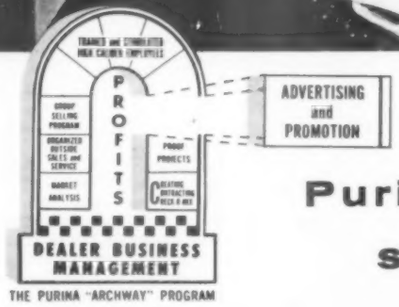
Meeting the challenge of the '60's with service

Purina Salesman Kirkpatrick (standing) and Radioman Gault cooperate in making local Purina Dealers' commercials newsy, interesting and helpful.



THE PURINA "ARCHWAY" PROGRAM

Purina Dealers' advertising services serve farm folks, as well as sell

In many parts of the country, you can turn on your radio, open your mailbox, read your local newspaper and see or hear information and advertising programs sponsored by Purina Dealers. These programs, including the largest agricultural outdoor and direct mail programs in the feed industry, are designed to sell through service.

Purina, which shares in the cost of such localized advertising programs, provides "sales partnership" help to make them successful. In planning a new program, counsel of one of Purina's six Regional Advertising Managers is available. Once the program starts, the Purina Salesman works with his Dealers to keep the program and materials a service to those who produce milk, meat and eggs—and selling for the Purina Dealer.

The effectiveness of such advertising has been proved over and over. The "sales partnership" support of Purina in these programs is contributing to the rising tonnage of scores of Purina Dealerships.

WHY THE PURINA FRANCHISE IS THE MOST SOUGHT RURAL RETAIL OPPORTUNITY

1. Dealers who follow the Purina Archway Program realize worthwhile profits on their investments.

2. Purina offers a well-rounded money-management program for Dealers.

3. The Checkerboard is rural America's and Canada's best-known trademark.

4. There's a Purina Chow especially adapted to every livestock and poultry production situation.

5. Purina offers complete programs of breeding, management, sanitation and feeding.

6. Dealers are backed by one of the world's outstanding commercial research facilities.

7. Purina provides a complete line of research-proved sanitation products.

8. A coast-to-coast network of mills serves Purina Dealers.

9. The Purina Salesman and the Dealer have a "Sales Partnership" relationship.

10. The Ralston Purina Company is the world's largest feed manufacturer.

There are progressive, independent Purina Dealers covering most areas. If you are in one of the few remaining markets where the Purina Franchise is available . . . and if you are interested in an outstanding investment opportunity, write: RALSTON PURINA COMPANY, Department F-62, St. Louis 2, Missouri.

BENNETT KIRKPATRICK, "sales partner" to Purina Dealers in the district around Rock Hill, South Carolina, works closely with Station WRHI in keeping "Checkerboard Roundup" interesting and helpful. With the cooperation of Harper S. Gault, station manager, field trips are made once or twice a month. From 500 to 600 farmers are interviewed each year. "Sales Partner" Kirkpatrick has five Dealers in the Rock Hill area cooperating on "Checkerboard Roundup." It is their program. Similar programs are broadcast from York and Lancaster, stations also in his district.

PURINA ... YOUR PARTNER IN SERVING ANIMAL AGRICULTURE

Arizona Research in Beef Feeding Told

TUCSON, ARIZ. — The use of whole cottonseed as a source of fat and protein, substitution of dehydrated cantaloup for milo and diammonium phosphate as a possible nonprotein-nitrogen compound for ruminants were among the subjects of research reported at the Arizona Cattle Feeders' Day held here.

Reports on work of the University of Arizona Agricultural Experiment Station also covered supplemental vitamin A levels for feedlot cattle and studies of protein level, barley vs. milo and rolling of grain (Feedstuffs, June 10, page 1).

WHOLE COTTONSEED AS A SOURCE OF FAT (ETHER EXTRACT) AND PROTEIN FOR THE STEER FATTENING RATION—Efficiency of converting feed to gain and cost factors favored adding 4% fat to a base 14% crude protein ration through use of whole cottonseed in this test.

Efficiency of the two higher fat content rations was noted in this study conducted by Farris Hubbert, Jr., W. H. Hale, John Kuhn, E. B. Stanley and Bruce Taylor.

The five researchers said that whole cottonseed is an excellent source of crude protein and energy and that its use is influenced by the factors of availability and cost in relationship to cottonseed meal or grain. They said that their study was conducted to compare the value of whole cottonseed as a source of both protein and fat to a 14% protein fattening ration with or without 4% added rendering plant tallow.

The treatments randomly allotted to replicated pens in this study were: (1) 14% crude protein, (2) 14% crude protein with 4% added fat (ether extract) from rendering plant tallow and (3) 14% crude protein with 4% added fat from whole cottonseed.

It was reported that the efficiency of converting feed to gain favored the higher fat content rations—934 lb. to 992 lb. for the control steers. It was noted that this is a saving of 6.85%. Four per cent added tallow reduced the feed required per 100 lb. gain by 2.7%. The 4% added fat from whole cottonseed resulted in a reduction of 9.0% in feed required per unit of gain. With whole cottonseed valued at $44 per ton this ration produced 100 lb. of gain for $19.05, $3.07 less than the control ration and $4.44 less than the ration with added tallow.

The researchers said that even though the ration containing tallow was slightly more efficient in producing gains, the substitution of 80 lb. of tallow per ton at 7¢ lb. for the same amount of milo at 2.1¢ lb. resulted in an increase of $1.37 in cost of gains per 100 lb. over the control.

It was also noted that cattle were finished for their grade with no observable difference in live grade.

DIAMMONIUM PHOSPHATE AS A POSSIBLE NONPROTEIN-NITROGEN COMPOUND FOR RUMINANTS—Data from this trial suggest that diammonium phosphate may be useful as a nonprotein-nitrogen compound for fattening cattle, but considerable work is needed to further evaluate the compound, according to W. H. Hale, E. L. Russell, Jr., and Dr. Farris Hubbert, Jr.

The researchers stated that the use of urea as a nonprotein-nitrogen compound in ruminant rations is an accepted practice. They noted that considerable work has been conducted with other nonprotein-nitrogen compounds, but their use in ruminant rations has not been accepted. They commented that this is due primarily to the cost of the compounds used or to their limitations which have been quite similar to those of urea.

On the subject of urea, they noted, "Current recommendations for urea are that it comprise no more than 1% of the total ration or supply no more than 25% of the protein equivalent. Under usual feeding practices, the levels used are lower than those mentioned above. At high levels of feeding, the efficiency of urea conversion to rumen bacterial protein is reduced. Toxicity of urea is well known but with proper feed mixing and feeding management it rarely becomes a problem."

The Arizona researchers said, "Phosphorus supplementation of cattle fattening rations is generally accepted. The advantages that would occur if a suitable nonprotein-nitrogen compound also contained phosphorus are apparent. Diammonium phosphate contains 21.4% nitrogen and 23.5% phosphorus. This amount of nitrogen gives the compound a protein equivalent of 134%."

It was stated that toxicity and nitrogen balance studies have been completed with lambs and will be reported in summary form. One cattle trial has been conducted, according to the report.

The research men said that the differences in nitrogen retention by the two groups are not significant although the lambs receiving diammonium phosphate retained slightly more nitrogen than lambs receiving urea.

"This nitrogen balance trial indicates that, in the ration studied, the nitrogen from diammonium phosphate was utilized as satisfactorily as that from urea," the report stated.

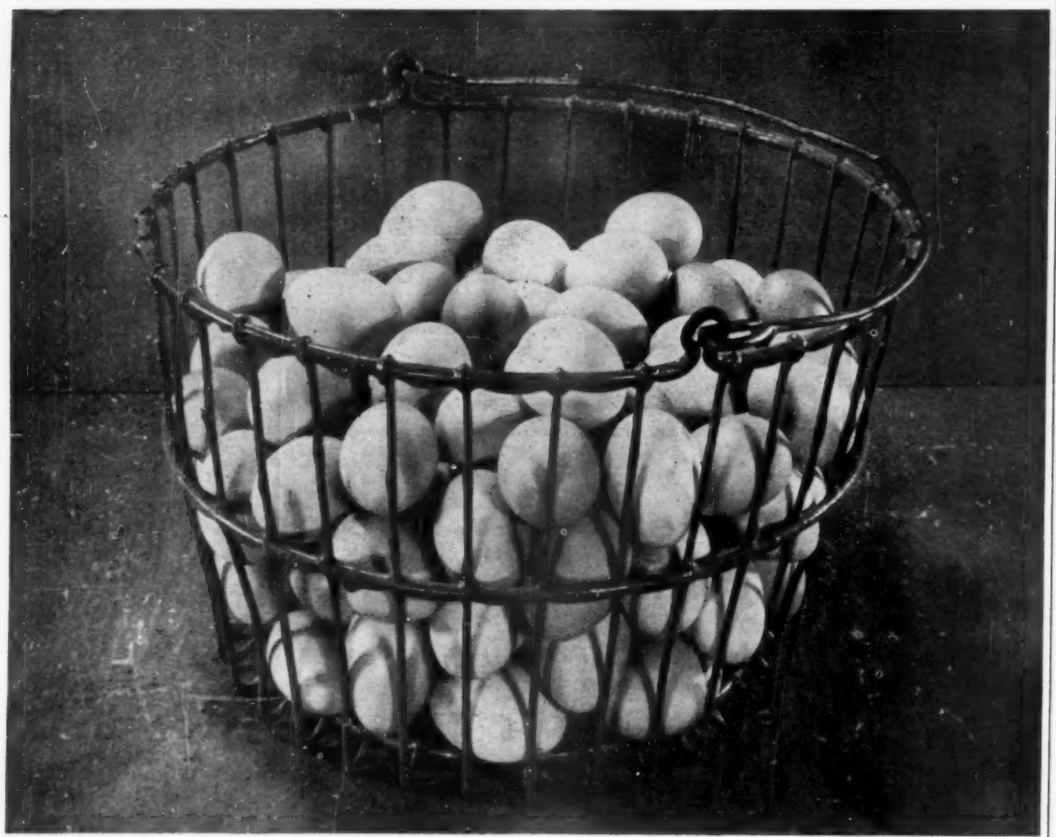
The report further stated that the rate of gain with the diammonium phosphate treatment was satisfactory but not as large as for the other two treatments. There appeared to be no general effect on feed intake or feed efficiency.

THE SUBSTITUTION OF DEHYDRATED CANTALOUP MEAL FOR MILO IN BEEF CATTLE RATIONS—Cantaloup meal can be fed at a level of 13% of the total ration with excellent results in regard to gain and live weight, it is reported by Dr. Farris Hubbert, Jr., W. H. Hale, John Kuhn, E. B. Stanley and Bruce Taylor.

The research men said they undertook the study to evaluate cantaloup meal as a replacement for 25% and 50% of the milo (13 and 26.5% of the total ration, respectively) in a fattening ration fed for a period of 126 days.

They noted that previous studies at Arizona on this product resulting from cantaloup surpluses at the end of the growing season in the Yuma Valley had shown that it could be substituted for 50% of the barley in a fattening ration for at least a 65-day feeding period.

Treatments for the replicated pens



How these eggs are making integration **more profitable!**

For one thing there are more of them. Among the proven meat-type females which bird consistently lays the most eggs? The Nichols 108, of course. But now the big news is what's *in* these eggs—the offspring. In the first hatch of the 15th Maine Test the three 108 Cross entries, sired by three different males, finished 2nd, 3rd and 4th in points spread out of 20 entries! (The winning entry came from a cross far behind in egg production.) What's more, recent field records from the most important broiler areas show that today's 108 Crosses are matching the best records in growth and conversion. Under intense research pressure America's first crossbred female is realizing its high potential as a meat-type breeder. Meantime 108 flocks continue to average close to 160 *hatching* eggs per hen housed!

It used to take an integrator who produced his own hatching eggs to appreciate the 108 fully. Not now. Today's 108 produces both the eggs *and* the offspring to protect your margin no matter what the market price of broilers. Isn't it high time you put these eggs to work for you?

Nichols 108's are available at all Nichols and Arbor Acres branches: Brunswick, Me., Skowhegan, Me., Concord, N. C., Blairsville, Ga., Dahlonega, Ga., Albertville, Ala. Carthage, Miss., Springdale, Ark., Tenaha, Tex., Thorntown, Ind., San Luis Obispo, Calif.

Nichols POULTRY FARM, INC.

BRUNSWICK, MAINE

were: 10% crude protein (control), 25% replacement of milo with cantaloup meal and 50% replacement of milo with cantaloup meal.

Research work showed that there was no significant difference in the rate of gain. However, the feed intake and daily gain were slightly higher for the 13% cantaloup meal ration than for either of the other rations.

It was noted that substituting cantaloup meal for 50% of the milo (26.5% of the total ration) slightly depressed both feed intake and gain. The droppings were somewhat loose on the higher level of cantaloup meal although no difficulty was experienced in keeping the cattle on feed, according to the report.

The researchers said that well prepared, clean cantaloup meal proved to be worth 106-109% the value of milo on the basis of feed required per unit of gain and with the cattle selling at the same price per hundredweight.

When Feed Is Blamed, Here's How Feed Man Can Uncover the Facts

MILWAUKEE—When a feed man believes his feed has been unjustly blamed for causing a livestock or poultry problem, he may find merit in following a fact-finding procedure suggested by Dr. J. R. Curtis, a Portage, Wis., veterinarian who addressed the June 5-6 Central Retail Feed Assn. convention in Milwaukee.

Here are the steps he recommends:

1. "If no veterinarian has been called to investigate, ask the farmer involved who his veterinarian is and request permission to have him come to the farm.

2. "Don't depend on the free service of your commercial feed nutrition expert. The farmer may not know him and probably will feel that the nutritionist is there to protect you.

3. "If a veterinarian is involved, call him and get an explanation. If necessary, ride out to the farm with him and get a first-hand look. Unless some unreasonableness comes up that looks like it might develop into trouble, don't by any means send your own veterinarian or some stranger to the farm.

"If the veterinarian's visit and examination are not satisfactory to everyone involved, ask the veterinarian to obtain assistance from an impartial agency such as the agricultural college in your state or the state department of agriculture.

4. "Your best advertisement is a satisfied customer and you should do everything possible to keep him that way, even in the face of trouble."

Shipments of Primary, Secondary Feeds Up

OTTAWA, ONT. — Shipments of primary or concentrated feeds and secondary or complete feeds in Canada were larger in March and the January-March period this year as compared to last, while deliveries of all other animal feeds were smaller in both periods, Canadian officials reported.

March totals were: Primary feeds, 40,932 tons (39,971 a year earlier); secondary feeds, 231,555 (224,309); and all other animal feeds, 45,861 (51,426). January-March totals: Primary feeds, 123,050 tons (112,180 a year ago); secondary feeds, 667,572 (607,592); and all other animal feeds, 138,502 (140,024).

Resigns for Town Post

HARTLAND, VT. — Donald A. Frail, manager of Hartland Feed Co., an E. W. Bailey & Co. branch store, for nine years and for 17 years with the Vermont feed manufacturing firm—has resigned to become town manager of Hartland, an appointment by the town selectmen.

Mr. Frail is succeeded to the managership of the feed store by Chester Lapine, for many years an employee there.

Mr. Frail served two terms as a director of the Vermont Feed Dealers & Manufacturers Assn., the only active trade organization of its kind in New England.

He came to Hartland from the Essex Junction, Vt., branch store of E. W. Bailey & Co., at the time he became manager of the firm's store here.

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"ONLY 15 MINUTES EVERY TWO WEEKS TO FEED 54 HEAD ...with BROWER *Kleen-Feed!*"

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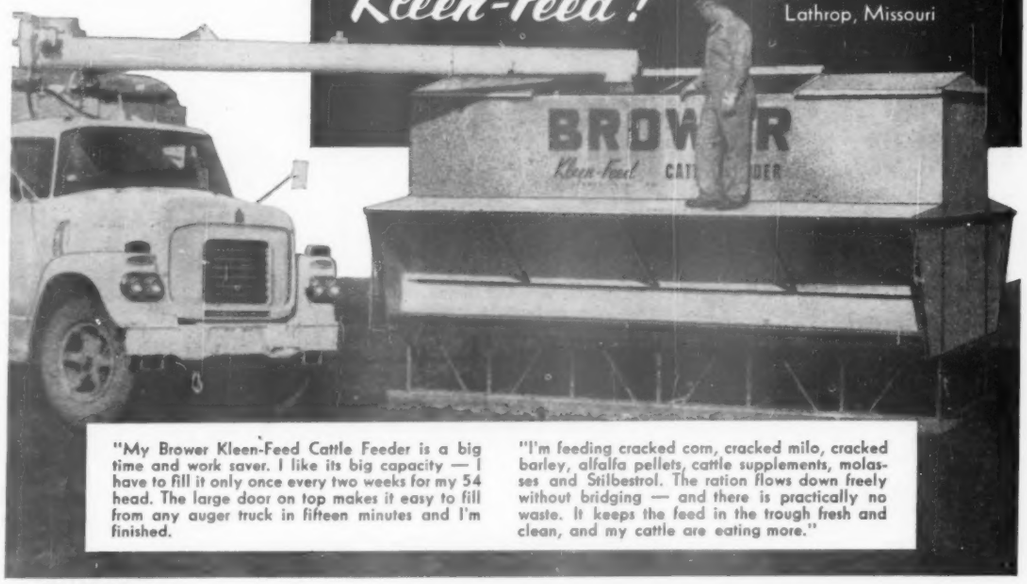

"My Brower Kleen-Feed Cattle Feeder is a big time and work saver. I like its big capacity — I have to fill it only once every two weeks for my 54 head. The large door on top makes it easy to fill from any auger truck in fifteen minutes and I'm finished.

"I'm feeding cracked corn, cracked milo, cracked barley, alfalfa pellets, cattle supplements, molasses and Stilbestrol. The ration flows down freely without bridging — and there is practically no waste. It keeps the feed in the trough fresh and clean, and my cattle are eating more."

SELL BROWER *Kleen-Feed* CATTLE FEEDERS

GET BIGGER VOLUME BULK FEED SALES AND PROFITS

- BIG CAPACITY—Fill Only Once a Week
- Serve More Customers in Less Time . . . Lower Delivery Overhead . . . Increase Sales Volume.
- Feed Stays Fresh, Clean, More Palatable—Cattle Eat More.

Now . . . an exciting new self-feeder for cattle that's a cinch to sell! Solves your customers' bulk feed storage problems . . . you also make more profit through bigger volume sales to your bulk customers; lower your overhead costs; provide more efficient customer service. Special hopper and trough design keeps feed clean, fresh, palatable. Cattle eat more; make faster, more profitable gains. Built to give 15 to 20 years of service with heavy rust-resisting steel. Ruggedly braced throughout.

TWO SIZES for the large or small herd

Large 15 ft. feeder has 250 bushel capacity — feeds 100 cattle for a week on one filling. 7½ ft. feeder has 125 bushel capacity — feeds 50 cattle for a week on one filling.

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Antibiotic Feeding Studies Reported At European Symposium in Norway

OSLO, NORWAY — Researchers from Europe and the U.S. reported on various antibiotic feeding studies with poultry, swine and dairy animals at a symposium held here June 8-11.

Some 25 papers were presented at the event, called the European Symposium on Antibiotics in Animal Nutrition. It was arranged by Apothekernes Laboratorium.

E. Wohni, Norway's minister of agriculture, opened the symposium and welcomed scientists from Europe and the U.S. to the event.

Summaries of reports presented follow:

POULTRY—Research on the mode of action of antibiotics was reported in a paper by Dr. M. E. Coates, National Institute for Research in Dairying, Reading, England.

Among researchers, it was noted, it is recognized that the growth promoting effect of antibiotics in chicks is connected with antibiotics' depressing harmful microorganisms in the intestinal tract.

Dr. Coates reported that a mixed microflora very rapidly arises in the intestinal tract in chicks newly hatched, a stable type of microflora being established in the course of the first two days. She had examined the intestinal content in one- and two-day-old chicks, raised at the institute, and found it to contain spores and vegetative cells of Clostridium welchii. She did not, however, find this microbe in the intestinal content of chicks that had been supplemented with penicillin. It was also absent in animals from new or absolutely clean housing, or found only in very small numbers, irrespective of whether the animals had been given penicillin or not.

On a neighboring farm, she found the microbe in all the chicks, whether they had received penicillin or not.

Organisms isolated from the intestinal content in chicks treated with antibiotics produced no lecithinase, i.e., the a-toxine normally produced by Clostridium welchii. In the opinion of the author, it therefore appeared as if the growth-promoting effect of antibiotics is associated not only with the elimination of the above-mentioned microbe, but in a higher degree with the fact that antibiotics depress the toxine production of the microbe.

In infecting germ-free chicks with Clostridium welchii, their growth was retarded, but this effect was neutralized when penicillin was used.

She concluded by pointing out that more experiments are needed, also experiments on other micro-organisms in the intestinal tracts of the chicks, in order to obtain a full explanation of the effect of the antibiotics.

Dr. H. Zucker, University of Munich, told of experiments in which 50 gm. of zinc bacitracin per ton was given as a supplement to hens with low egg production because of conditions in the poultry house. A "very great increase in egg production and a quick moulting" were obtained, the German scientist said. On the other hand, no increase in production was obtained by feeding bacitracin to good layers.

Supplementation of chicks with 2.5 and 5 gm. of zinc bacitracin per ton of concentrates in different rations gave higher gain (3-11%) and better feed efficiency (2.6-5.5%). The 2.5 gm. level gave as good results as the 5 gm. level.

Supplementation with zinc bacitracin and zinc bacitracin plus penicillin at levels of 4 gm. per ton and more has improved performance in Swedish experiments with chicks and swine, said Dr. A. Frolich. In the work at the experiment station, the additions resulted in increases of 2-8% in gain and improvements of 2-4% in feed efficiency. Dr. Frolich said the supplementation improved some poorly balanced rations. It may, among other things, result in a reduced requirement for vitamins B_{12} and D in rations deficient in these vitamins, he indicated.

A report on Swedish work with broilers indicated that equal levels (5 gm. per ton) of oleandomycin and zinc bacitracin resulted in the same saving in feed and the same response in gain in relation to the control birds. The experiments, comprising 400 chicks, with six breeds, lasted 10 weeks. For chicks raised in batteries, mortality rates were reported at 5.3% for the control group, 4.2% for the oleandomycin group and 4.0% for the bacitracin group.

Dr. Milton L. Scott of Cornell University, Ithaca, N.Y., said that "low level" supplementation with an antibiotic like zinc bacitracin will generally control the "disease level" in ordinary poultry farming. After pathological organisms have entered the blood, it is necessary that "high level" supplementation with easily absorbable broad-spectrum antibiotics be used.

Dr. R. F. Gordon of Houghton Poultry Research Station, Huntington, England, told of experiments on antibiotics for poultry and the effect on resistance of the bacteria. He said that in some preliminary studies, chicks were infected by Salmonella typhimurium bacteria and were given 10 gm. of zinc bacitracin per ton. These birds, he said, did not build up any resistance to chlortetracycline or to furazolidone, used to control infectious diseases.

With use of normal concentrations of antibiotics in animal nutrition, no residues can be shown in animal products, said Dr. O. Dybing, Veterinary University of Norway. At higher than normal concentrations, he said, residues of tetracyclines can be found. Bacitracin "only in very small

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quantities" is absorbed from the intestinal tract, he indicated.

Dr. Dybing discussed bacterial resistance to antibiotics, and he said that in some experiments with tetracyclines, increased resistance has been found in bacteria of the coli group. He said that there has not been increased resistance in the base of bacitracin because it is not used as a systemic antibiotic in therapy.

Dr. Karl Tschiederer of Austria reported antibiotic studies with chicks. The experimental group, he said, received zinc bacitracin throughout the test, while the control group received chlortetracycline during the first period and chlortetracycline and oxytetracycline during the second period. The total weight for the bacitracin group after eight weeks was reported 15% higher, with improved feed efficiency. Antibiotic levels were listed as 4 gm. per ton of bacitracin and 10 gm. of the other antibiotics per ton.

Dr. Tschiederer said that in another experiment, with equivalent but energy-poor rations, birds received 4 gm. of zinc bacitracin, or 2 gm. of oleandomycin, or 10 gm. of procaine penicillin per ton. Eight-week weights for the three groups were reported at 998, 993 and 948 gm., respectively, and losses at 6, 14 and 13%, respectively.

SWINE—In a swine experiment reported by Dr. Zucker of the University of Munich, one group of growing-finishing pigs received an ordinary ration without animal protein, while another group received the same concentrate mixture with the exception that plant protein was replaced by 8% of fish meal. When 7.5 gm. of zinc bacitracin and 2.5 gm. of penicillin per ton were added, gain was increased 9% and feed efficiency was improved 9% in the group receiving plant protein. The addition did not improve results with the animals receiving plant protein. At the conclusion of the experiment, production was as high in the animals receiving vegetable protein supplemented with antibiotics as in the group receiving fish meal in the ration.

Dr. F. Munchberg of the Veterinary College in Vienna said that in a 90-day test, pigs supplemented with 25 mg. of zinc bacitracin per kg. of complete feed had a significantly higher gain than the non-supplemented animals. Average initial weight of the animals was 27 kg. Average final weights were 91.6 kg. for the experimental group and 87.7 kg. for the control group. When the bacitracin level was reduced to 10 mg. per kg. of feed, no significant difference in gain was shown.

In another experiment in which copper sulphate was used instead of bacitracin, there was less gain and a poorer feed efficiency in the experimental group than in the control group, according to Dr. Munchberg. There was no response in gain when the feed contained an adequate amount of copper sulphate, he said.

COWS AND CALVES—Dr. F. N. Andrews of Purdue University, Lafayette, Ind., told the symposium that U.S. experiments show that grass ensiled with zinc bacitracin makes an "excellent feed" and gives milk production equal to that produced by

SELLIN' SAM — **By Jim Zilverberg**

"Oh-oh, he must have sold his feeder steers. He seems glad to see you!"

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OUTLOOK or LOOK OUT!

Challenges, Opportunities and Pitfalls Await Feed Men in the Months Ahead

An informed outlook is the best insurance against the "look out!" warnings that usually come too late. That is one of the reasons for the popularity of Feedstuffs' Outlook Issue. That's the reason it has been necessary to reprint the Outlook features in the Dec. 31, 1960, issue.

This 20-page reprint includes 11 articles on business prospects and important trends in various areas of the feed industry, with emphasis on marketing at a profit. Included in the report are exclusive articles by Robert D. Emmons of Wirthmore Feeds, Inc.; Earl P. Mitchell of Alabama Flour Mills; E. C. Fuller of Nutrena Mills, Inc.; G. A. Ensminger of Albers Milling Co., and R. H. Bauman and J. O. Dunbar of the agricultural economics staff at Purdue University.

You'll also find that valuable information from Feedstuffs' survey of feed manufacturers is presented in detail in the report.

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City ..... **Zone**.... **State** .....

silage preserved with molasses and other additives. Experiments show that a controlled and favorable fermentation in the silage is obtained by adding 5 gm. of bacitracin per ton of grass or legumes which have been chopped or crushed. The silage, he said, has a satisfactory pH value and contains suitable levels of lactic acid and only a trace of butyric acid.

J. Brolund Larsen, Den Kgl. Veterinaer og Landbohojskole, Copenhagen, reported a Danish experiment in which the aim was to replace skim milk for calves by a calf starter composed entirely of plant products after the calves were seven weeks old. To achieve this, he said, the animals received an antibiotic supplement until they were 95 days old. One group received a normal ration of skim milk without antibiotics, another was fed concentrates supplemented with chlortetracycline and a third received concentrates supplemented with zinc bacitracin. Average daily gains were 730, 675 and 657 gm., respectively. The researcher said the control group had a slightly but significantly higher weight gain than the other two groups. There were no significant differences between the antibiotic groups, he indicated.

Dr. H. Hvidsten of the Agricultural College of Norway reported experiments in which zinc bacitracin was tested with calves. In one study, limited quantities of whole milk were fed, together with some skim milk, concentrates and hay. All seven calves in each of two groups had been born in the herd in which they were raised. Gain and feed consumption were reported practically the same for both groups.

In an experiment with bull calves fed up to marketing at 18 weeks on comparatively high levels of skim milk, the group getting bacitracin had 11% better gains during the first six weeks. Later the difference in weight was practically eliminated, the researcher said, but there was a slight tendency toward improved feed efficiency and better carcass quality in the experimental group.

In a third experiment, not completed, heifer calves were used. Average gains in the experimental group were reported 9% greater than in the control group, with feed efficiency improved 6%.

FILES BANKRUPTCY

HARTLAND, WIS.—Howard J. Luedtke, owner of the Hartland Feed & Fuel Co., has filed a petition of bankruptcy in federal court in Milwaukee. Mr. Luedtke listed liabilities of $84,188.71 and assets of $33,182.93. His wife, Avis Irene, in a separate petition, listed liabilities of $56,172.21 and assets of $8,697.73.

MOBILE MILL

(Continued from page 26)

weeks, so we had to keep the mill off the road for that length of time.

Stence: Last winter we lost approximately six days due to bad weather. The year before, however, we lost approximately 30 days due to bad roads.

Do you operate on a route system of any kind?

Prahm: No.

Kroeger: Yes.

Stence: Yes.

If so, please explain how your route system operates.

Kroeger: We go south and west on Mondays, north and west on Tuesdays and Fridays, north and east on Wednesdays, and south and east on Thursdays. Saturdays we use for cleanup and servicing the mill.

Stence: We go north one day, north and west one day, south one day, south and west one day, with one day for cleanup and maintenance.

Do you feel the route system has been beneficial to your operations?

Kroeger: Yes.

Stence: Yes.

If so, please explain.

Kroeger: It's practically a must for profit. Without it we would be running in all directions every day. This cuts down on your efficiency and increases your cost.

Stence: It saves extra time on the road and our customers know what day to expect us.

Do you have a salesman work ahead of mill lining up jobs?

Prahm: No.

Kroeger: No.

Stence: No.

If not, why not?

Prahm: We haven't done this in the past, but I plan to get out in the country on a regular basis myself, soon. I have my boys on the mills now, so I'll have some time to do this.

Kroeger: It hasn't been necessary so far. I should say that I have an especially good operator who helps sell the service and the feed.

Stence: The mill is busy now to capacity.

Do you have a delivery truck working ahead of your mill?

Prahm: No.

Kroeger: No.

Stence: No, but the mill itself can carry two tons of sacked concentrate in an upright box built on the unit.

What is the operating cost per mill for your mill, including depreciation?

Prahm: Thirty-four cents per mill, including insurance, depreciation, gas and oil on two mills.

Kroeger: I'm not sure.

Stence: I'm not sure.

Do you pay your operator a salary or is he on a commission basis?

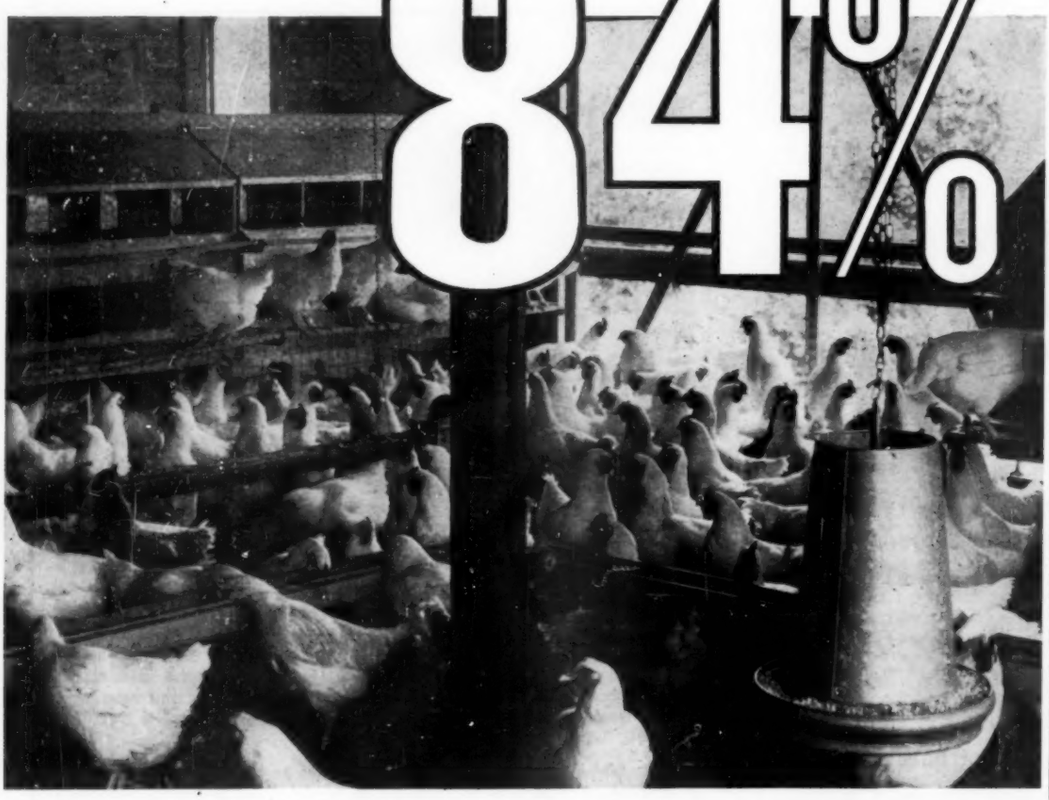
Prahm: Our operators are on a straight salary of $70 per week or a total of $140 per week for the two mills.

Kroeger: I have a rather unusual set-up—and one that I would recommend to anyone. My operator owns half of the mill. I pay him $80 per week and we share the profits 50-50. This arrangement has really worked for me. As I mentioned earlier, I have an outstanding operator-partner.

Stence: Both. He gets $75 per week plus 50¢ per mix on all mixes over 50 per week, plus 50¢ cut on molasses, plus 10¢ cut on feed.

Started: 74,400 day-old pullets...

Housed: 84%



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FLOW PROBLEMS—The visit of a British specialist on flow problems prompted this meeting in the Kansas City office of Mel Miller & Co., Inc. From the left, those shown are: Hoyle B. Puckett, Sr., University of Illinois, Urbana; Donald R. Lanphair, Mel Miller & Co.; Dr. Harry B. Pfost, Kansas State University; R. L. Brown, The British Coal Utilization Research Assn., Leatherhead, England, and Loren V. Burns, Mel Miller & Co.

British Flow Problem Specialist Visits U.S.

KANSAS CITY—While coal and formula feeds seem a long way apart, a common interest in materials flow and segregation recently brought a British specialist in flow problems and a U.S. group interested in the same field together for a meeting here.

Prompting the meeting was the visit of R. L. Brown, director of basic research laboratories, the British Coal Utilization Research Assn., Leatherhead (near London), to the U.S. Loren V. Burns, vice president in charge of technical and engineering operations for Mel Miller & Co., Inc., here, knew of Mr. Brown's work and invited him to discuss some of his findings with several people in this country. Others in the group were: Hoyle B. Puckett, Sr., principal agricultural engineer and leader of the automatic electrical farm equipment investigations, Farm Electrification Research Branch, University of Illinois; Donald R. Lanphair, director of farm feed manufacturing services for Mel Miller & Co., and Dr. Harry B. Pfost, department of flour and feed milling industries, Kansas State University.

The meeting was Mr. Brown's first contact with work being done in the feed and grain industries, according to Mr. Burns. And, Mr Burns noted that this is another step in the move to bring together all the research that has been done on materials flow so that it can be applied to working situations in connection with the consulting studies being done by the Mel Miller organization.

During the discussions, it was learned that Mr. Puckett's current project is a pneumatic farm feed handling system that is automatically and electrically controlled. Such a system is now in operation on an Illinois turkey farm, he reported.

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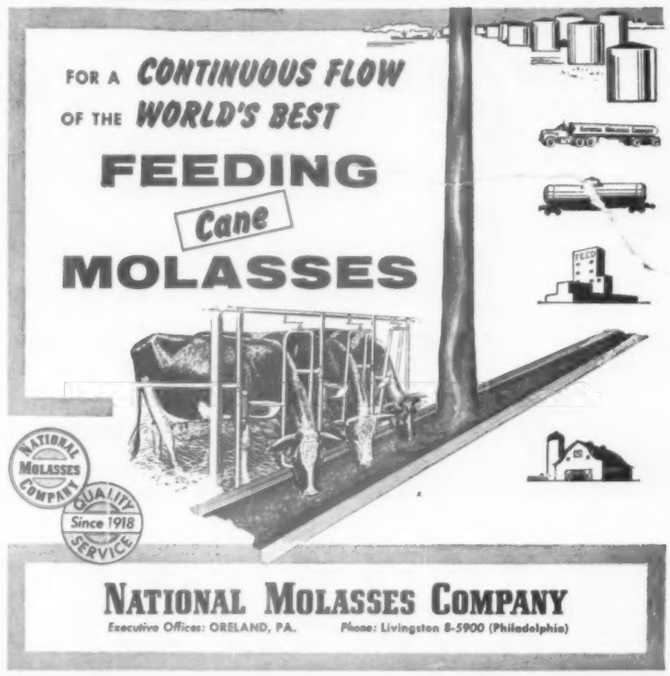

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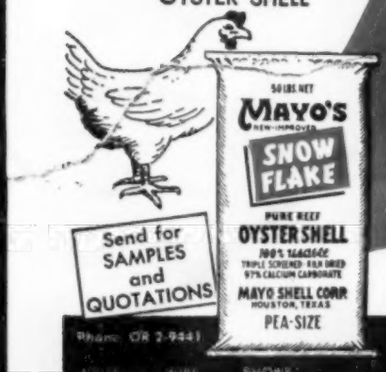

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Commercial Storage Has Room for About 40% of Total Grain

WASHINGTON—Roughly two of every five bushels of grain on hand in the U.S. are stored in commercial off-farm facilities.

This nation's total grain storage capacity has been estimated at around 12 billion bushels, notes John W. Kirkbride of the U.S. Department of Agriculture's Statistical Report Service. And of this total capacity, commercial elevators, warehouses, terminals, mills, ships under private control and oilseed crushers who store grain provide space for nearly 5 billion bushels of grain.

Commercial storage capacity off farms is now about three times what it was in 1944 before the big grain production expansion period of the early 1950's.

As of Jan. 1 of this year, when commercial off-farm grain storage was estimated at nearly 5 billion bushels, Kansas and Texas led the states in capacity. Each had a capacity of more than 750 million bushels. Nebraska ranked a distant third with space for less than 500 million bushels. The leaders were followed by Illinois, Iowa and Minnesota, with the top six states accounting for 60% of off-farm capacity.

In addition to commercial off-farm capacity, grain is stored on the farm and in off-farm space owned or under the control of the government.

Mr. Kirkbride notes that exact figures on farm storage capacity are not available, but it seems reasonable to him that farm capacity could have been as high as 6 billion bushels on Jan. 1.

Off-farm grain storage capacity owned or under the control of the government largely represents CCC bins having a total capacity of almost 1 billion bushels. Mothball ships, under government control and used to store grain, contribute varying amounts to the total storage capacity, depending on the amount of grain held in such space. On Jan. 1 of this year the government had about 38 million bushels of wheat stored in ships.

While total storage capacity in the U.S. is near 12 billion bushels, an estimated 80% of that total space was in use Jan. 1. Stocks of grain in all positions on that date totaled about 9.5 billion bushels.

Emphasis Change Set For Virginia Meeting

ROANOKE, VA.—When the 1962 Virginia Feed Convention and Nutrition Conference is held, more emphasis will be placed on milling, management and sales techniques.

This comes about as a result of a vote by the directors of the Virginia State Feed Assn. to return to this type of convention program as a means of attracting more feed men for both the convention and the nutrition conference. In 1958 the state convention and the nutrition conference of Virginia Polytechnic Institute were combined, leading to a de-emphasis of milling and management program features, it was noted.

All nutrition subjects will be covered on the first day of the 1962 convention, which is scheduled for Feb. 20-21 at the Hotel Roanoke, the group has announced. Business management problems of concern to feed manufacturers and dealers will be handled on the second day.

Decision to return to emphasizing subjects of interest to millers and dealers was reached at the meeting of directors at Charlottesville.

E. B. Kaylor, Harrisonburg, secretary-treasurer of the feed association, was appointed co-chairman of the convention-conference planning committee along with Paul M. Reaves of VPI. A. G. Maxwell, Salem, was named chairman of the arrangements committee.

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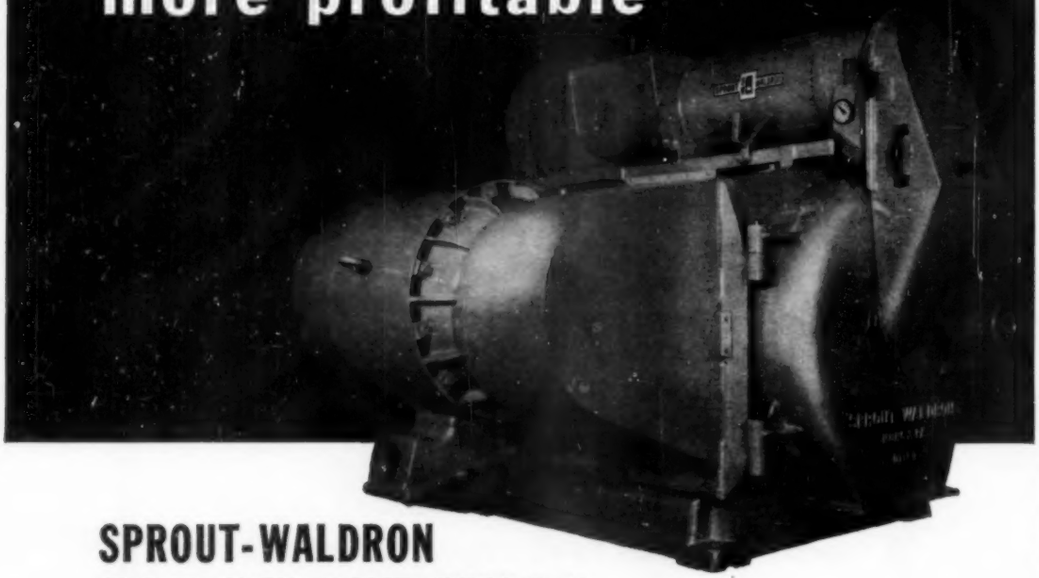

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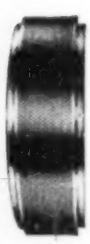

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Illinois Economist Gives His View of 'Big' Grain Signup

URBANA, ILL.—A timely analysis of some probable consequences of the 1961 feed grain program was issued recently from the University of Illinois as the word from Washington indicated that farmers have signed up to idle about 26% of their corn and grain sorghum land (Feedstuffs, June 10, page 4).

L. H. Simerl of Illinois' department of agricultural economics had these speculative answers to the question of what will be the result of this "big" signup:

"The acreage retired may be less than the acreage signed up. The signup involved only a sort of option to divert corn and sorghum grain land to nonproductive uses. Some farmers will decide not to participate. Others will retire less than the maximum number of acres listed. But the dropout seems likely to be fairly small.

Supposition

"Suppose that at least 20% of the corn acreage is retired. This would not mean that production would be reduced 20%. There are several reasons: (1) The retired acreage will be the lower yielding land. (2) Some nonparticipating farmers will increase their corn acreages. (3) Some farmers, whether or not they participate will use more fertilizer and adopt other yield-boosting practices.

"Farmers have harvested about 83 million acres of corn in each of the two years since acreage allotments were dropped. If they harvest 20% less this fall, they will be taking corn from 66.2 million acres.

"Average yield on the harvested acres (which will be better than average land) seems likely to be 2 bu. higher than the 53-bu. average posted last year. That would produce about 3,640 million bushels.

"Disappearance (domestic use and export) totaled about 4 billion bushels last year and seems likely to run to 4.1 billion bushels this marketing year.

"We know that disappearance varies with price changes; more corn is used when the price is low. Disappearance increased by one third (1 billion bushels) when the price was reduced from about $1.50 in the early 1950's to $1.12 in 1959-60. The price this year may average about $1.03, counting the grain 'sold' to Uncle Sam at the support level of $1.06.

"We might guess that disappearance of corn in the 1961-62 marketing year will total around 4 billion bushels. Increases in numbers of livestock and poultry to be fed may be largely offset by a reduction in use on account of the price increase.

"In this case, the 1961 crop would be about 360 million bushels short of needs. Commodity Credit Corp. sales of corn would make up the difference. Actual sales of CCC corn will probably exceed 360 million bushels. But farmers will have around 1 billion bushels of new corn eligible for price support. Most of them will not sell at prices much below the support level. The more corn the CCC sells, the more farmers will put under price support. Thus the market price seems likely to rise to near the support level.

"Let's make some more guesses: If our carryover this fall is 2 billion bushels and if the crop is around 3,640,000,000 as we expect, our total supply for 1961-62 will be 5,640,000,000 bu. Subtract 4 billion for use and export, and we would still have 1,640,000,000 bu. for carryover on Oct. 1, 1962. That would be more than we carried over in any year before last fall."

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No. 7538—All-Purpose Feed Base

Development of a multi-purpose, low cost feed ingredient known as "Fruen's All-Purpose Feed Base," has been announced by Fruen Milling Co.

This product is said to fill a definite need for a low cost grain base for complete dairy, beef, poultry and hog feeds. It can be used by feed manufacturers or portable mill operators to supply a nutritious base ingredient for most types of formula feeds, company officials state.

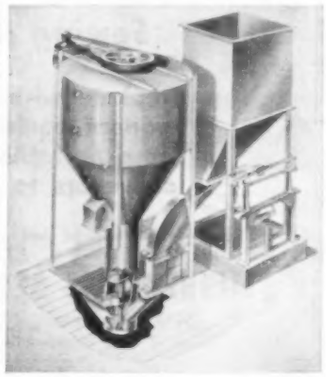
The product is finely ground and is uniform in color and granulation. For samples and additional information, check No. 7538 on the coupon and mail.

No. 7536—Package Mill

A new package mill unit which manufactures completely balanced rations, and "may be set up easily anywhere," has been introduced by Myers-Sherman Co.

This compact unit incorporates three pieces of the company's line of Fords milling equipment—scale-mounted ingredient hopper, hammermill and vertical mixer. If rolled grains are preferred, a roller mill can be substituted for the hammermill. A heater-dispenser tank for fats can also be added.

Originally developed for exhibit and use in the U.S. pavilion at the



Cairo International Agricultural Exhibition, this mill evoked great interest, according to the manufacturer.

It can be shipped conveniently and economically to any part of the world, installed quickly and easily, and requires 15-30 h.p., depending upon the units selected.

For additional information, check No. 7536 on the coupon and mail.

No. 7534—Automatic Checkweighers

The complete line of automatic in-line checkweighers by Toledo Scale, division of Toledo Scale Corp., is fully illustrated in a new eight-page booklet.

This new literature contains material on the accuracy, checkweighing speed and weight ranges of each Toledo checkweigher model, as well as pertinent construction data. Various industrial applications of the checkweighers are illustrated with installation photographs.

The booklet explains Toledo checkweigher accuracy in terms of "zone-edge tolerance," which is a positive means of expressing checkweighing accuracy, that is, the consistency with which a machine chooses between adjacent weight zones when the package weight falls in the break-even area between weight zones. The narrower this area is, expressed in fractional ounces, the greater the checkweigher accuracy and reliability throughout a given machine's weight range, according to the manufacturer.

For additional information, check No. 7534 on the coupon and mail.

No. 7531—Turkey House Automation

A new booklet on turkey house automation is now available from the Big Dutchman Automatic Poultry Feeder Co.

The booklet contains a full explanation of the time and money-saving

suspended feeding system, plus a wrap-up of all the integral products needed to complete an automatic turkey raising system.

The booklet, which contains 16 pages of facts and photos, is available by checking No. 7531 on the coupon and mailing.

No. 7533—Portable Feed Manufacturing Unit

Introduction of a new portable, self-powered feed manufacturing unit mounted on a tandem axle has been announced by Dodgen Industries.

Called the Model PMOV 70 Mix-O-Vator, it comes complete with a 9 ft.

hydraulically raised and lowered discharge auger and contains its own operating power in a 37 h.p. engine.

For use in commercial production of feed at the farm by dealers or for use by the feeder, the Mix-O-Vator is equipped with a scale and the purchaser's choice of hammermill, roller mill or burr mill.

The manufacturer claims hourly feed production up to 8 tons. The scale weighs out portions of feed as well as weighing in feed ingredients.

The accompanying photo shows the Mix-O-Vator with roller mill. Shipping weight is approximately 3,100 lb. For additional information, check No. 7533 on the coupon and mail.

No. 7539—Sanitation Product

Development of a new product to control flies and strong odors, and at the same time produce a compost fertilizer end product, has been announced by Organic Soil Builders, Inc.

Called San-O-Pen, the new product combines the action of rock phosphate, long known as a barn deodorant, with carefully selected microbe cultures, which reduce dairy barn wastes to a compost-type fertilizer.

The microbe action is said to create heat to kill all fly and pest larvae found in waste materials, thereby preventing the hatch of new fly populations in treated barns.

Officials report that the gray powdered product offers no volatile contamination for milk. Flies are not killed by poisonous materials, but by having the composting process devour their larvae. Since San-O-Pen eliminates barn odors, transient flies do not congregate where it is used.

It is said that when barn wastes are removed, the fly-killing deodorant has treated them so they rapidly form a compost fertilizer, which can be spread on the field as a secondary benefit.

Experiments are being carried on in turkey sheds, hog barns and sheep pens, according to company officials. "So far, the composting wastes, coupled with the action of the rock phosphate, have eliminated odors and flies in all such establishments," they report.

For additional information on this product, check No. 7539 on the coupon and mail.

No. 7537—Bucket Elevator

Pioneer Belting & Conveyor Equipment Corp. has developed a new type of bucket elevator which is described as job-engineered for efficient, speedy handling of large volumes of grain or feed at economical cost.

The elevator is of double leg design, self-supporting and built in excess of standards to offer long service life with minimum maintenance, according to the manufacturer. Dust-tight, seam-welded construction, angle iron reinforced, is featured throughout.

An added advantage is said to be unitized construction of assemblies with precision-fitted parts and accessories, which offers simple erection with low initial cost, according to the company. The mounting plate is predrilled at factory to permit easy installation.

Company officials say that 12-gauge material is used for the boot and head sections, while 14-gauge steel is used for the leg sections. The leg sections come in unitized 10 ft. lengths, which enable changes or modifications to be made in elevator height or capacity with the aid of matched parts.

Head shafts and boot shafts conform to best engineering standards and are tailored for the load and capacity requirements of each elevator. The head pulley is crowned and lagged and a flat faced pulley is used in the boot.

A large door is located in the head

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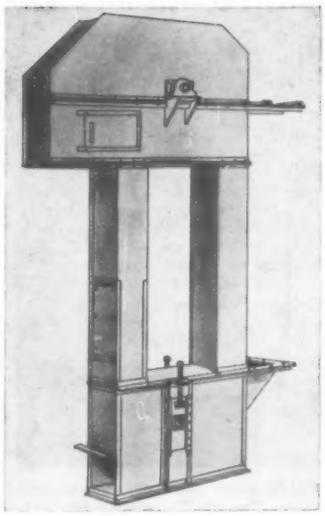


to permit access for inspection of buckets or belt, as is also a large clamp-type door in the down leg (or up leg) for assembly of buckets and for inspection. Feed inlet spout may be mounted to suit individual needs in up or down leg.

Components, such as cat walk, ladder and enclosure, are supplied to conform with individual needs. The bucket elevators are designed in a series of sizes to handle capacities from 700 to 10,000 bu. per hour.

For additional information, check No. 7537 on the coupon and mail.

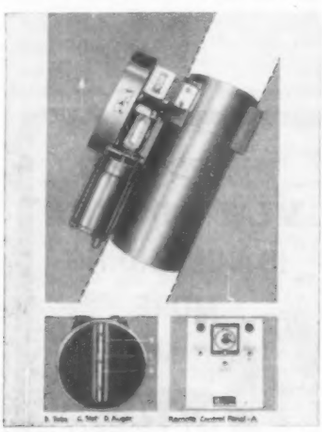
No. 7535—Automatic Sampling Device

A new, automatic sampling device has been announced by Gustafson Manufacturing Co. Known as the Gustafson Automatic Sampler, it can be installed in any flow pipe where dry material is handled. It is said to be especially practical for sampling feed or grain, dry chemicals and all types of seed.

Feature of the sampler is that it can be pre-set for sampling at any time interval, to take whatever samples are desired.

The automatic sampler takes a full-diameter or full-depth sample of the flow pipe, which is said to assure a "true" sample of the commodity.

Principle of the operation is as follows (note accompanying photo): Remote control panel "A" automatically engages sampler at pre-set intervals. On each such interval, the sampler tube "B" is rotated so that the slot opening "C" faces the flow stream, allowing the commodity to enter the tube. Simultaneously, an auger "D" within the tube revolves and conveys the sample out of the tube and into a plastic tube where it is delivered to the sample room by gravity.



The distributor of the device is Corn States Hybrid Service, Inc.

For complete information on the automatic sampler, check No. 7535 on the coupon and mail.

No. 7532—Windowless Poultry Houses

Windowless poultry houses in the Masonite Panel System of factory-built farm buildings are now available from the Masonite Corp., in widths up to 40 ft. and in any length.

Advantages of these houses are said to be better control of temperature and ventilation, lower cost, lower maintenance and better control over lighting.

Company officials say that Masonite pre-painted hardboard panels are used in insulated, glued and nailed sections to build the poultry house on the site in a few days.

For additional information, check No. 7532 on the coupon and mail.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number of the coupon and forwarding it to Feedstuffs.

No. 7468—Grain drier series, Shanzer Manufacturing Co.

No. 7469—Pellet mill, Wenger Mixer Manufacturing.

No. 7470—Pressure cooker - extruder, Sprout, Waldron & Co., Inc.

No. 7471—Grain cleaner fact sheet, Clute Corp.

No. 7472—Portable bag closure, Dave Fischbein Co.

No. 7473—Arsanilic acid booklets, Abbott Laboratories.

No. 7474—Bulk delivery truck, Pamco, Inc.

No. 7475—Cable socket for grain shovels, Brooks Machine & Mfg. Co.

No. 7476—Conveyor belting, Corns Conveyor Belt Co.

No. 7477—Moisture recorder leasing, Burrows Equipment Co.

No. 7478—Portable air filters, Fuller Co.

No. 7479—Hog health product, Dr. Salsbury's Laboratories.

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26. Feedstuffs' 1961 Analysis Table for Feed Ingredients—by Charles H. Hubbell 20c

52. 1961 Analysis and Feeding Value Tables for Beef Cattle and Sheep—4-page article by Dr. Spencer H. Morrison, Nutrition Consultant, 25c single copy; 3-5 copies, 15c each; 10 or more, 10c each.

80. Feed, Fat and Swine—Dr. Coy C. Brooks, Virginia Polytechnic Institute 20c

90. Feedlot Disease and Health Losses—series of six articles—plus special guide to feedlot animal health and disease problems of beef cattle and sheep—Dr. Spencer H. Morrison, Nutrition Consultant. Reprinted from FEEDLOT, national farm business magazine for cattle and lamb feeders $1.00

96. Feed Manufacturing and Distribution Costs—a series of three articles, Dr. Richard Phillips, Iowa State University 40c

100. Rolled Common Barley Serves as Both Grain, Roughage for Fattening Steers—H. B. Gourin, Ralston Purina Co. 20c

101. Barley for Hogs—A Decade of Research—Dr. W. E. Dinusson, North Dakota Agricultural College 20c

102. Enzymes in Swine Feeding—Dr. J. E. Oldfield, Oregon State College 20c

103. Mineral Requirements of Turkeys—Dr. L. S. Jensen, Washington State University 20c

104. What Is Being Done to Combat the Problem of Thin Shells—Dr. P. A. Thornton, Colorado State University 20c

105. Energy Intake and Laying House Temperature Influence Egg Numbers and Production Efficiency—C. F. Peterson, University of Idaho 20c

106. Be Prepared for FDA Inspections—Dr. H. S. Wilgus, The Ray Ewing Co. 20c

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NEW MEXICO FIRE—Flames which destroyed the buildings housing the Mitchell Seed & Grain Co. and the Pecos Valley Trading Co. in Roswell, N.M., are shown in this photo. The fire, fanned by a brisk wind, destroyed the buildings in one hour (Feedstuffs, May 20, page 7). Mitchell Seed & Grain has re-opened for business at 206 East 8th Street, according to E. W. Mitchell of the firm. The Mitchell firm had occupied the destroyed structure for 46 years.

No. 7480—Continuous weighing scale, B-I-F Industries.

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No. 7494—Corn sheller for mobile mill, The Iowa Portable Mill Co.

No. 7495—Truck blower unit, Ripco, Inc.

No. 7496—New automatic bagging scale, Richardson Scale Co.

No. 7497—Equipment purchasing guide, The Grain Processing Machinery Mfrs. Assn.

No. 7498—Feed bag coding, Pitney-Bowes, Inc.

No. 7499—Automatic egg gatherer, Big Dutchman Automatic Poultry Feeder Co.

No. 7500—Grinding and mixing unit, Tusco Sales.

No. 7501—Conveyor model bag closure, Minneapolis Sewing Machine Co.

No. 7502—Equipment literature, Seco, Inc.

No. 7503—Basket extractor, V. C. Anderson Co.

No. 7504—Portable pneumatic unloader, Sprout, Waldron & Co., Inc.

No. 7505—Portable transfer unit, Fuller Co.

No. 7506—Automatic bulk handling equipment, The Henderson Manufacturing Co.

No. 7507—External fat application system, Wenger Mixer Manufacturing.

No. 7508—Belt-propelled tripper, Finco, Inc.

No. 7509—Ventilating fan recorders, Service Recorder Co.

No. 7510—Grain soaker-feeder, Baughman Manufacturing Co.

No. 7511—Vibration inducers, The Martin Engineering Co.

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No. 7513—Air inlet for poultry houses, The Big Dutchman Automatic Poultry Feeder Co.

No. 7514—Mixing equipment, Superweld Corp.

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No. 7519—Dog food fortifier, Borden Special Products Co.

No. 7520—Feed service merchandising program, William E. Davies Co., Inc.

No. 7521—Centrifugal dust separator, Day Co.

No. 7522—Bulk weighing brochure, Toledo Scale Corp.

No. 7523—Steam boilers, Sellers Engineering Co.

No. 7524—Conveying and rotary valves, Systems Engineering & Manufacturing Co., Inc.

No. 7525—Bulk feed unit, FMC Bulk Transport Systems.

No. 7526—Batch process controller, Control Equipment Corp.

No. 7527—Air unloading for mobile units, Ripco, Inc.

No. 7528—Gyro-cooler data sheet, Young Machinery Co., Inc.

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Turkey Sales Job: 11 Million More Birds During July-September

CHICAGO—With a tremendous increase in turkey production this year, the turkey industry has a real promotion and marketing job cut out for itself. The magnitude of this job was spelled out this week by Richard C. Larkin, chief, program analysis group, poultry division, U.S. Department of Agriculture.

Mr. Larkin spoke at the third annual Summer Turkey Fair, co-sponsored by the Poultry and Egg National Board and the National Turkey Federation. Some 200 editors, writers and food industry leaders were present to see and hear of new ideas for serving turkey at lunch, dinner and snack time. The Turkey Fair luncheon heralds the coming of Summer Turkey Time, July 27-Aug. 6, when a national campaign will emphasize turkey for summer menus.

Because of an exceptionally large turkey crop this summer, the food leaders were reminded that turkey will be one of the best bargains in the market place.

Mr. Larkin predicted that the record large 1961 turkey crop will be about 105 million head, up 25% from the previous high in 1960.

What will be the timing of the marketing? Mr. Larkin noted that seasonal distribution of marketings has been changing, with an increasing proportion sold prior to the fall holiday season—which has been a prime factor in increased per capita consumption. In 1956, about 10% of the crop was marketed by producers during the first six months of the year, with some 16% of annual consumption during the same period. In 1960, on the other hand, 15% of producer marketings were during the first six months and 22% of annual consumption.

During the past five years, January-June turkey consumption has increased 63% while producer prices have declined only about 14%, showing how consumer demand has increased earlier in the year. For the last six months of the year, however, consumption has increased only about 15%.

This Year's Problem

The turkey marketing problem this year, Mr. Larkin noted, is not limited to any one period. Through May, for example, 43% more pounds of turkey were sold by producers than during the same period last year, with prices down 13%.

Looking ahead, Mr. Larkin spelled out the marketing problems as now seen.

During the first quarter this year, the industry marketed 2 million more head than a year ago, representing an increase in ready-to-cook tonnage of 27 million pounds. During the April-June quarter, some 4 million more head are coming to market than a year ago. This represents an increase in ready-to-cook tonnage of 49 million pounds.

For the July-September quarter, Mr. Larkin sees almost 11 million more head marketed than during the same quarter in 1960, representing an increase in tonnage of 142 million pounds.

The USDA official says it is too early to estimate the situation during the fourth quarter.

Referring to competition from other meats, Mr. Larkin said that if the chicken broiler is the strongest competition for turkey, the demand outlook for turkeys during the months ahead should be better than currently and so far this year. This is becaause the broiler industry, experiencing severe price problems, can make production adjustments more quickly. By July and for the balance of the year, said Mr. Larkin, there is reason to believe that per capita broiler supplies will be about as large as during the same period last year. The prospective red meat supply should be roughly equivalent to a year earlier also.

In the July-September quarter, the job is to merchandise some 11 million more birds than a year earlier. This means an increase of ¾ lb. per person. To the extent this can be done, prices will not fall proportionate to the increase in marketings, Mr. Larkin observed.

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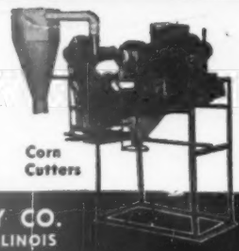
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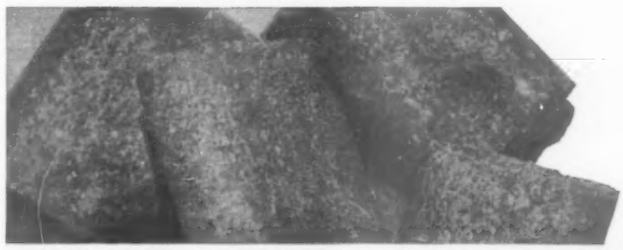
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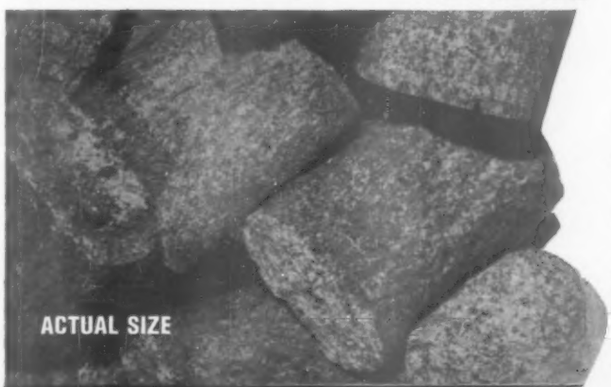
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JOE BROOKS

BY AL P. NELSON

The Mobile Boys Have Problems

Molasses Moeller, Joe's tall, round faced mobile operator, and small, wiry Frenchy LeFeve, his helper, drove the big mobile mill up to the curb at Joe's home one summer evening about 6:30. Both men got wearily out of the mobile and approached Joe's front door.

"Well, boys," greeted Joe cheerfully, coming to the screen door. "Something wrong?"

Molasses looked at Frenchy. "Go ahead, Frenchy. You tell him. You throw words around better'n I do."

"Joe," said Frenchy waving his hand. "Molasses and I have trouble — woman customer trouble — and maybe we'll quit."

"Woman customer trouble?" exclaimed Joe. "Wait a minute. Now what in the world is that?"

"Well, you see, it is this way, Joe," began Frenchy. "You know those Dexter sisters on Route 6—those old maids? Their father died two months ago."

Mary Brooks' cheerful face appeared at the door. "Oh, hello, boys," she said. "Have you had supper yet?"

We Have Trouble

Frenchy smiled. "Well, no, but we have trouble, so we came to see Joe right away."

"Trouble can wait," Mary said authoritatively. "I haven't taken the roast beef and potatoes off the table yet. And we've got lots of apple pie. Come right in and wash up and eat."

"Well," said Molasses, "you don't have to ask us twice."

"Good," said Joe, "and we can talk about the trouble later."

So the two mobile mill men sat down at the Brooks' kitchen table and did justice to Mary's delicious roast beef, pickles, potatoes, buttered carrots, apple pie and coffee.

Frenchy patted his stomach and smiled happily when Mary put another huge piece of apple pie on his plate without asking him. "Ah, la belle femme," he said, bending and kissing Mary's hand. "She is so good to us."

Mary flushed. "Oh, I love to see men eat," she said hastily.

Joe cleared his throat. "Now what's this about you fellows quitting on account of women customers?"

Frenchy shrugged. "Joe, I'm a bachelor, you know that?"

Joe nodded. "Yes, you are, but I don't know why."

"And Molasses is a bachelor, too."

Molasses flushed a deep red.

"Yes," said Joe. "When are two good looking fellows like you going to break down and get married? You're in your 30's, have money in the bank and have no bad habits, except chewing snuff."

Frenchy straightened and took a deep breath. "Joe," he said, "we are afraid of women."

"You're afraid of women? Why? You don't act afraid of my wife."

"Oh, no," explained Frenchy waving his right hand. "We are only afraid of women who chase us."

"And the Dexter girls are chasing you?"

Both Frenchy and Molasses nodded, desperate looks in their eyes. "When their father was living they were different," Frenchy said. "But now that he is dead, they bother us when we grind and mix on the farm.

Lunch After Work

"After we have finished grinding, they invite us in for lunch and coffee. We have to go, you know. It is good customer relations, you say. Then one Dexter girl, Sarah, serves Molasses gooseberry pie in one room, and the other, Abigail, serves me at a table in another room."

"And I love gooseberry pie," moaned Molasses. "But I choke on it because Sarah sits and watches me with that funny look in her eyes. It makes me nervous, Joe."

"When Abigail sits and looks at me, I eat anyway, without nervous indigestion," Frenchy said. "But I am always reminding myself I am a Frenchman, and I am romantic underneath, as you call it. I must never allow myself to be carried away, you know. I watch her all the time."

"I can't stand it any longer, Joe," put in Molasses. "If we turn them down when they ask us to lunch, then maybe they'll get mad and take their grinding and mixing business some place else. What can we do?"

"Oh, they are nice looking girls," put in Mary. "Their father wouldn't let them mix with people much. That's why they have stayed on the farm. Now that he is dead, they just want to spread their wings a little. I don't believe they are over 35."

"I don't want to get married!" Molasses said stubbornly. "I just want to run the mobile and let the women take care of themselves."

"And I want to save $3,000 in the bank," Frenchy said matter of factly. "After that, maybe I will sow some wild oats, or maybe barley. But not before."

Joe had been frowning while the mobile employees were talking. The Dexter sisters had a married man and

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family living in a separate house. The hired man ran the farm, and he was Joe's friend. The grind and mix business, plus concentrate and molasses sales, gave Joe quite an annual volume of business from this one farm. And he didn't want to lose that business.

Suddenly his eyes lighted. "Say, I have an idea we can try, boys," he said.

Molasses and Frenchy exchanged quick, hopeful looks.

"Yes, Joe, you have something good, maybe?" Frenchy said.

"What day of the week do you call on the Dexter farm?" Joe asked.

"Every other Tuesday," Frenchy said. "And they come around too quickly, Joe."

The feed dealer chuckled. "Well, boys, I give you one day off every two weeks, especially during the busy seasons. For a while we can arrange to have Mike Reitci and Bill Durham handle the mobile the day you call on the Dexters. They are both married men with sizable families, and it won't take the Dexter sisters long to find that out. Let's hope that will solve the problem."

Molasses looked at Frenchy and Frenchy looked at Molasses. Both broke into wide grins. "Vive!" cried Frenchy. "Our problem is solved. Joe, you are a real friend."

The two men got up and began slapping each other on the back. They kept up a babble of animated conversation with Joe as they went to the door. "Thanks, thanks for the fine meal, Mary," cried Frenchy.

The next moment they were on the sidewalk walking toward the parked mobile mill, now surrounded by a crowd of gaping children.

"Oh, I feel so sorry for those Dexter sisters," Mary said sadly. "Joe, can't we do something about it? Can't we find some good men for them?"

Joe held up his hand. "Stop it, Mary. I'll do almost anything ethical to get more feed business and to please customers or have harmonious employee relations, but I draw the line at matchmaking."

Even after Joe had picked up his newspaper and settled down to read, Mary stood at the screen door gazing out into the soft summer night. "Poor girls," she said sadly. "Poor girls. Now, more than ever before, they'll know it's a man's world."

"Oh, don't mind a few coins—on our slack days we help out the Blink's Armored Car Service."

$50,000 DAMAGE

WATERTOWN, S.D.—A fire which started in an unused junk and auto parts building caused an estimated $50,000 damage to the Lakeview Hatchery here. Oscar Nygaard, president of the firm, said that at least 12,000 pullets and some 2,000 turkey poults were lost in the blaze. He stated that an additional 18,000 eggs in the firm's incubator room were lost from smoke damage.

Here are some reports on recent work offering a solution to the Blood Spot problem

FEEDSTUFFS, June 11, 1960

Scientist Discusses Egg Bloodspot Causes

MANHATTAN, KANSAS—Rodenticides or a shortage of vitamin K in rations may cause eggs with bloodspots, according to Dr. Paul E. Sanford, poultry husbandry department at Kansas State University.

Referring to low vitamin K, the poultry scientist noted that most poultry rations now contain dehydrated alfalfa meal as a natural source of vitamin K, and that some feed manufacturers are adding synthetic vitamin K as a guard against the hemorrhagic condition.

Dr. Sanford says a 1-2% loss due to bloodspots is to be anticipated (on the candled basis), but if the grading loss runs much higher than 2%, a poultryman "must" become concerned.

Firm's Test Shows Vitamin K Reduces Blood Spot Incidence

VALLEY STREAM, N. Y. – Recently announced experimental results indicate that the feeding of vitamin K reduces the percentage of blood spots in eggs—an abnormality which causes heavy marketing losses.

This observation comes from work conducted by Heterochemical Corp. to study the value of using stabilized vitamin K premixes in retarding the incidence of egg blood spots.

In a technical paper on the tests involving "Hetrogen K Premixes," a brand of stabilized menadione sodium bisulfite produced by Heterochemical, Raymond Berruti and Gilman T. Dedrick conclude:

"It appears that under experimental conditions the addition of 4 gm. of stabilized Hetrogen K per ton of commercial layer feeds would be of great economic advantage in decreasing the number of eggs with blood spots and increasing the percentage of marketable eggs."

Summarizing results of the study in which the incidence of blood spots, egg production, egg weight, interior egg quality and feed consumption were emphasized, Mr. Berruti and Mr. Dedrick report that hens with a history of high blood spots when taken off feed containing 4 gm. of stabilized vitamin K returned to laying eggs with a higher percentage of blood spots.

"These results suggest," they say, "that the stabilized K had a marked effect in prevention of hemorrhages of blood vessels inside the yolk sac and follicle."

More Research Needed

The investigators observe that the need for additional research in the area of reducing blood spot incidence is apparent, and they note that previous work with lower levels of vitamin K of "a questionable stability" showed no curtailment of blood spot occurrence.

They say the study they describe was initiated in view of recent technological advancement in the stabilization of vitamin K in premixes and in view of new information relative to blood spot formation.

They say blood spots in shell eggs continue to be a serious problem for the poultry industry. "Economic losses from these defects are great and with the development of automatic detecting devices the problem is becoming even more intensified from the standpoint of breeder and producer."

Test Procedure

Heterochemical's vitamin K study began with the placing of 540 White Leghorn hens, 14 months of age, in individual 8-in. wire cages. These hens were fed a basal diet on which they had been maintained since reaching 50% production.

The birds were divided into three rows of 180 birds each. Rows A and C were fed the basal diet, while row B was fed the same diet plus 4 gm. of Stabilized Hetrogen K per ton of ration. These hens were maintained in a cage layer house at temperatures which normally exist under winter conditions (in northeastern U.S.). A uniform light day of 14 hours was maintained.

After the fourth week, row B was split into two sections. One section continued to receive the basal ration plus vitamin K. The other section was fed the basal ration only.

Mr. Berruti and Mr. Dedrick report that the percentage of blood spots for row B, the group fed the basal diet and vitamin K, at the beginning of the trial was 6.9%. Row A and row C percentages were 6.3% and 7.7%, respectively.

At the end of the two-week period following initial feeding of Hetrogen K to row B, the incidence of blood spots dropped to 3% in this group, while little change in incidence appeared in rows A and C.

The investigators report that at the end of the four-week period a further decrease (1.7%) in blood spots was evident in row B birds. Row A and C hens continued to show only slight change in the percentage of blood spots.

Mr. Berruti and Mr. Dedrick note that birds receiving supplementary Hetrogen K returned to laying eggs with a high percentage of blood spots within 16 days after the removal of supplementary K from the ration. One half of the birds in row B which continued to receive supplementary K laid eggs with an incidence of blood spots of 1.9%, whereas the group of birds taken off of Hetrogen K laid eggs 5.4% of which exhibited blood spots.

Further investigation is needed, the report authors say, to determine whether the reduction of blood spot incidence among birds in the test group was "due to the effect of Stabilized Hetrogen K in keeping blood vessels in better clotting condition or due to increased availability over other forms of vitamin K."

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Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.

Report on Selected Papers from the Annual Meeting of the American Dairy Science Assn. at Madison, Wis., June 11-14, 1961.

PART 1

One of the largest groups of interested dairy people from the U.S., Canada and foreign lands to meet in recent years held its annual conclave on the beautiful University of Wisconsin campus. The total registration was approximately 1,900 persons; thus, this meeting has assumed international importance, especially for scientists interested in the field of ruminant nutrition.

A total of 90 manufacturing papers, 135 production papers and 21 extension section papers, was presented by various personnel from both commercial laboratories and various colleges and universities. Besides this extensive program running in several sections at once, interesting papers were presented in several symposiums. Obviously, space in this column does not permit a review of all papers. Furthermore, many of them are of very basic and fundamental nature, which at present have little or no direct application to the commercial feed manufacturing industry. Certain selected ones offer us some practical ideas which can be placed into immediate usage by all. These will be discussed under several general headings.

PRODUCTION PAPERS

● **FEED UTILIZATION — Fairchild et al., University of Wisconsin,** have devised a hay score card which is repeatable as far as judges are concerned, and which at least partially reflects nutritive values as estimated in the work. It appears to be of more value on later cuttings and crops and those which have low grass content. Of the components of the score card, cutting date was the most important among first-crop samples (confirming earlier Cornell data) and leafiness was the most important among later-crop samples in estimating nutritive value.

Burton et al., University of Delaware—Much interest has been shown recently in the use of "expanded" concentrates in animal feeding, other than their already wide use in pet foods. The Delaware group has been most active in this area of research and has reported that when dairy heifers were fed expanded concentrates along with long hay, better growth was achieved than when similar animals were fed long hay plus ground concentrates, or when the hay and concentrates were mixed at a two parts hay to one of concentrate ratio, ground, and pelleted. In the eight-week trial the growth rate averaged 91, 79 and 70 lb. total gain for the respective treatments. This is a new development that manufacturers of calf foods, and other young animal feeds, may well keep an eye on for future developments.

Byer et al., University of Wisconsin, showed that steers and goats digested the dry matter and cellulose as well as energy of four alfalfa hays to the same extent, but that the goat digested the crude protein more extensively. Their results also demonstrated that the nutritive value of forages can be satisfactorily estimated from small hand clipped samples by using the artificial rumen. This is the method often used in "forage testing" services in many states, in advising farmers on feeding practices based upon hay samples sent in by the farmers.

Keith and associates, Virginia, compared the feeding of pelleted, ground, chopped and long hays on the feed intake, milk production, milk composition, body weight changes, nutrient digestibility and rate of feed passage through the digestive tract of dairy cows. The four hays were fed free-choice as the **sole source** of nutrients in a 4 x 4 x 4 Latin square. The feeding of the pelleted and ground hays resulted in significantly higher milk production, chiefly due to the higher intake of nutrients. Digestibility of dry matter was much poorer on the pelleted hay, with ground or chopped hay also being somewhat poor and very similar to each other. The pelleted hay gave significantly lower milk fat percentage and, as the particle size of the hays decreased, the rate of passage increased. Otherwise, only small differences existed between the various hay forms.

Martz et al., Purdue; Byers and Ormiston, University of Illinois, and Mellin et al., Maine—These three groups of researchers all gave reports on the effect of harvesting date as affecting feeding value. The Purdue investigators demonstrated that predominantly alfalfa hays and silages harvested at four selected advancing dates, averaged 3.5% less digestible dry matter and 2.8% less digestible crude protein than corresponding green-chopped materials cut at the same times.

Byers and Ormiston made the very good point that forage criteria should be based not so much on forage digestibility, per se, but on the amount of digestible dry matter consumed per 100 lb. body weight. Even though the alfalfa cut three times at the full bloom stage yielded 7,786 lb. of total dry matter per acre, as opposed to only 6,333 lb. in four cuttings at the bud-stage, the bud-stage had 208 lb. more total crude protein and 1,201 lb. less total crude fiber. Furthermore, the dry matter consumption per 100 lb. body weight was higher in all cases for the respective cuttings of the bud stage alfalfa-brome hay used. Of course, this fact has to be balanced against a total digestible dry matter per acre yield of only 3,733 lb. for the bud stage as opposed to one of 4,189 lb. for the full bloom stage in three cuttings. However, animal performance may be much better on the bud-stage, due to generally better digestibility of younger hays (with minor exceptions) coupled

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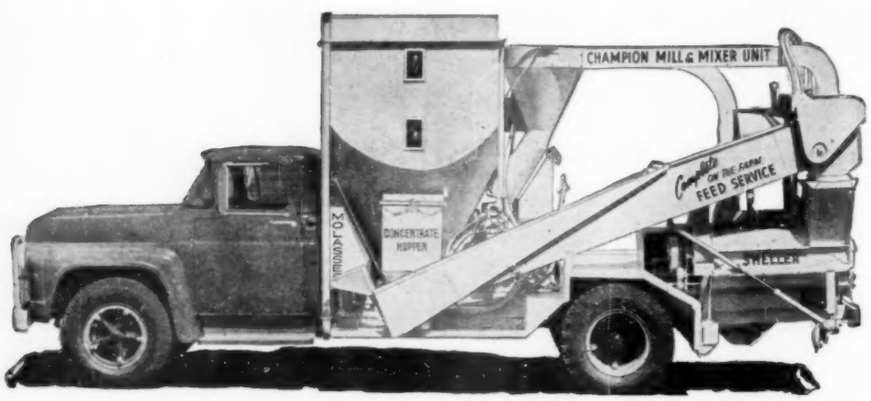

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with greater dry matter consumption per 100 lb. body weight.

Quite similar results with respect to declining digestibility for advancing stages of maturity were also reported by the Maine group for timothy hay.

Owen and Van Riper, University of Nebraska, reported an interesting experiment on the effect of very low fiber concentrate rations (3.0 or 4.5%) vs. medium fiber (13.6 or 15.0%) or high fiber (16.9 or 21.5%) ones, when fed as supplements on an equivalent TDN basis to lactating cows on alfalfa-grass strip-grazed pastures. No difference was observed in milk fat, fat-corrected milk production or body weight changes on the various fiber levels.

Larsen and Johannes, University of Wisconsin—A 112-day continuous feeding trial was conducted with four groups of 10 Holstein cows comparing four diets: (1) hay and grass silage with corn and oats; (2) hay and grass silage with ensiled ear corn; (3) haylage with ensiled ear corn, and (4) haylage with corn and oats. The cows on both haylage treatments produced more 4% F.C.M. than both groups of cows fed conventional hay and silage. Probably most of the difference can be explained by the fact that the dry matter consumption was 35.58 lb. daily for the hay and silage fed cows as opposed to 38.57 lb. daily for those fed haylage.

GOLF WINNER—A three time winner in the annual golf outing of the Northwest Feed Manufacturers Assn. is C. M. (Whitey) Campbell, Union Bag-Camp Paper Corp., Minneapolis. Mr. Campbell took low gross honors among members of the association with a 72 at the annual event held June 12 at Minnesota Valley Country Club, Bloomington, Minn. He had also won the trophy in 1957 and 1960. Taking low gross honors among non-association members was Ralph (Pat) Loy, Master Feed & Seed, division of Central Soya, Madison, Wis., with a score of 70.

Foss et al., University of Wisconsin, reported on the digestibility and intakes of corn, oats and sorghum silage and found no significant differences in the dry matter intakes. But, the digestion coefficients were significantly higher for corn silage for dry matter and energy than these values for either oat or sorghum silages. Thus, the total digestible energy was higher for corn silage.

Quite similar results were also reported by **Haenlein and Richards, University of Delaware,** in their comparison of Ambercane silage vs. corn silage. The nutrients in the Ambercane silage were less digestible than those in corn silage. Although the Ambercane silage fed cows gained more body weight than those on corn silage, they produced significantly less milk, milk fat and solids-not-fat.

Derbyshire et al., USDA, Beltsville, Md.—Many farmers are now applying nitrogen fertilizers to increase both the yield and protein content of grass forages. In this experiment, the application of nitrogen to orchard grass 15 days prior to harvest resulted in a forage and silage high in protein, but one which was decidedly in-

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ferior in quality to unfertilized grass when judged by present standards of odor, appearance, pH, acid ratios and ammonia content. In spite of this so-called "poor quality" when the silages were fed to animals there were no apparent differences in feeding value. This suggests that although commonly used criteria of silage value may be useful for silages made from crops of usual chemical composition, they may be much less useful when applied to forages of high nitrogen content.

Colette et al., Colorado State University, conducted a practical field trial with 50 cows fed thyroprotein and given an extra allowance of 10 lb. of grain per cow per day over a five month period, compared to another group of cows kept as control. The original basis for selecting the cows for thyroprotein supplementation was udder size, the larger uddered cows being given thyroprotein. Otherwise, normal management procedures were followed.

Even though the large-uddered cows produced an average of 7 lb. more milk per day than the controls before treatment began, and increased to 16 lb. more per day in the first month of treatment, they quickly decreased in production, so that by the fourth month the controls were producing more than the treated animals. The post-treatment differences became even greater. Economically, the balance turned in favor of the controls in the third month. Average differences of about $10 per cow per month in favor of the controls were observed in all groups in the later stages of the experiment.

Moody and Cook, Arizona State University — This experiment was conducted to see if whole cottonseed could be an economical feed source for dairy cattle in warmer areas in a limited fiber ration. The whole gin-run cottonseed was successfully used in the ration to increase the fat test of cows fed low-fiber rations under high climatic temperatures. There was no great tendency for this increased test to decline in the manner previously reported for low-fiber rations which do not include whole cottonseed, etc. The whole cottonseed was fed at the rate of 8 lb. per cow per day in a five month field trial with no noticeable ill effects, except for occasional bloating in cooler weather. Thus, it would seem that if low-fiber rations are used to make dairy cows more tolerant to high climatic temperature, it might be wise to include some whole cottonseed in the concentrate mixure. It is interesting to speculate whether or not the same effect could be produced by the feeding of whole soybeans, etc.

(Further reports from the meeting of the American Dairy Science Assn. will appear in next issue of Feedstuffs.)

Big Business

LITTLE ROCK, ARK.—A leading Arkansas poultryman told a group of Little Rock businessmen that the state's poultry industry now accounts for $235 million in business each year.

Jerry Hinshaw, manager of Arbor Acres Farms, Inc., Springdale, spoke at a meeting of the Farm and Ranch Club of Arkansas. He noted that poultry production is the second largest agricultural industry in the state and that Arkansas is the second ranking broiler state.

In addition to the sale of poultry products by producers, the business total came from the sales and payrolls of 109 hatcheries, 141 feed mills, 26 processing plants and the sale of medications and vaccines. Mr. Hinshaw said the feed mills produced 995,000 tons of feed valued at $69,550,000.

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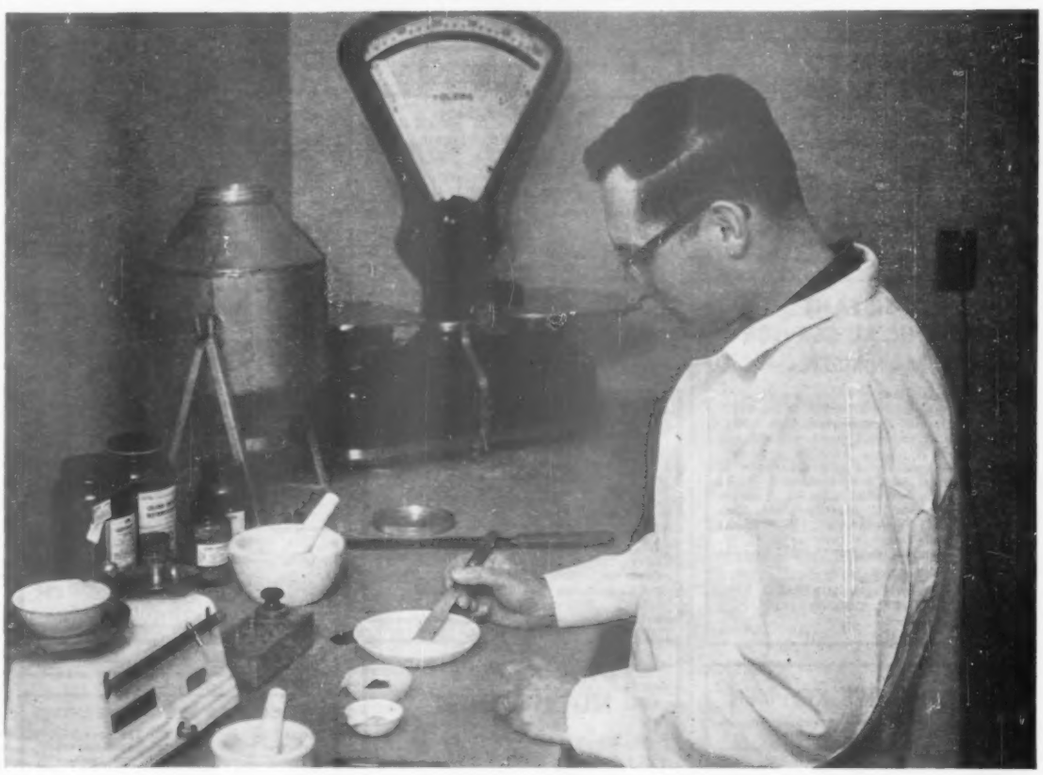

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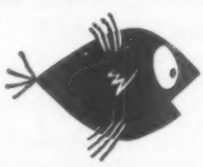

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MISCELLANEOUS

AUCTION

The Kensington Supply Co. located 24 miles east of Canton, Ohio, on Ohio U.S. 30, is quitting business. Real estate with 500 ft. of highway frontage, 700 ft. of rail siding, six buildings including feed mill and implement repair shop, four vacant lots. And all mill equipment, tools, new and used implements will sell at auction.

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GRAIN BANK

(Continued from page 54)

most all worked on a first come, first served basis.

Grain Bank Accounting — Several methods were used to record grain bank transactions. Commonest method was to issue a scale ticket to the customer at the time of deposit and to record the deposit in a grain bank ledger. Six banks had special deposit slips and two issued warehouse receipts. Weight of grain was used in all such systems. A few banks used dollar values based on predetermined prices rather than weight of the grain. As grain was withdrawn for processing, the ledger accounts were adjusted and the feed sales slip served

as the customer's withdrawal record.

The ledger accounts varied among the firms but were generally similar. Information contained consisted of:

(1) Kind of grain.

(2) Date and quantity of deposit.

(3) Date and quantity of withdrawal.

(4) Current grain bank balance.

All banks attempted to keep bookkeeping as simple as possible.

Feed Processing—The surveyed grain banks appeared to be well equipped to process feed. Twenty-one had grinding and/or rolling, mixing, molasses mixing and pelleting equipment. Nine had only grinding and mixing equipment. 13 operated molasses mixers without pelleters and one pelleted without mixing molasses. Seven of the firms planned to add equipment or enlarge their plants in anticipation of increases in grain banking.

About one-third of the banks required advance notice from customers before milling feed. Commonest requirement was one day's notice, although two required at least three days. Several banks not presently requiring advance milling notice anticipated that they would in the future. Two firms placed a maximum limitation on size of feed order and 10 specified minimum size. Minimums ranged from 500 lb. to 2 tons, with five firms requiring at least 1,000 lb. orders. Charges for feed processing varied but all charged both bank and non-bank customers the same rates.

Although all banks gave a choice between feed mill formulations and the customers' own formulas, several banks preferred to have customers use mill formulas. One firm used a price incentive to get customers to use its formulas. All but two banks kept a record of the formulas currently used by customers. Grain bank customers ordered a large quantity of feed by telephone. Seventeen banks reported that over 75% of their customers ordered all their feed by phone.

Feed Delivery—Delivery service was complementary, and in some cases necessary, to grain bank operations. Thirty-six of the 45 firms provided this service and 31 had trucks equipped with bulk tanks and automatic unloaders. Half of the firms estimated that 40% or more of the feed ordered by bank customers was delivered. Only seven firms with bulk trucks delivered less than half of the feed they processed.

Nineteen banks had one bulk truck, 11 had two, and one had three. Bulk truck capacity ranged from less than 3 tons to 8 tons. Commonest size was 6 or 7 tons, usually divided into compartments. Several banks intended to purchase additional bulk trucks or to provide delivery service in the near future.

Delivery charges varied, with several methods used to determine rates. Commonest method was to base the charge on the weight of feed delivered and/or the distance traveled. An additional minimum charge or a fee per trip also was often used. Other methods took the truck size into consideration or used mileage breakpoints. Some charged a flat rate regardless of weight or mileage. By assuming various distances and loads and computing charges, it was found that delivery charges per ton-mile declined as weight and size increased (Table 3). For example, a farmer living five miles from the dealer had a 14¢ incentive to order feed in three-ton rather than one-ton lots. All but one of the firms charged the same rate for bank and nonbank customers.

ADVANTAGES AND DISADVANTAGES OF GRAIN BANK OPERATIONS TO FEED FIRMS—Managers of grain banks surveyed cited both advantages and disadvantages of grain banking to their over-all operations. These observations are summarized into general categories and listed in order of frequency mentioned by the managers. Some firms listed as advantages the same item other firms cited as disadvantages.

ADVANTAGES TO THE FEED FIRM—Grain banking allowed more efficient mill operation because of:

(1) Ease in scheduling feed orders.

(2) Fuller use of labor.

(3) Longer range operating estimates based on grain in storage.

—Grain banks assured continuing patronage of customers.

—Grain banks gave rise to larger business volume by:

(1) Attracting new customers.

(2) Attracting larger feeders.

TABLE 3. Average Feed Delivery Charges Per Ton Mile Based on Assumed Distances and Loads, 45 Grain Banks, Kansas, 1960

Distance from dealer (miles)	Average charge per ton-mile 1-ton load	3-ton load	6-ton load
5	$0.35	$0.21	$0.19
10	.23	.13	.11
20	.15	.08	.06
25	.14	.07	.05

(3) Increasing sales of feed supplement.

(4) Increasing sales of other items stocked.

(5) Increasing cash grain business.

—Grain banks provided another means to serve customers.

—Grain banking gave the firm greater storage revenue than regular or government storage. (More firms claimed the opposite was true.)

DISADVANTAGES TO THE FEED FIRM—Grain banking caused more bookkeeping and other problems related to records and customer relations.

—Grain banking was found to be less profitable than regular or government storage.

—Grain banking created the need for additional feed processing and handling equipment.

—Grain banking by small feeders interrupted mill operations because of frequent formula changes.

—Grain banking made grain quality maintenance more difficult.

—Grain delivery at harvest time caused difficulty in handling and storage.

PLANNING A GRAIN BANK PROGRAM—While this report is descriptive, it suggests a framework within which grain bank programs can be developed. The study indicated that grain banks involve many areas of firm operation and that various types of problems can arise. Many of the firms surveyed proceeded on a trial and error basis and are working with informal policies. Past experiences of these firms point out many considerations faced in implementing or expanding grain banks. While no specific procedure is suggested here, certain general observations may be useful to firms in developing grain bank programs.

Before opening the door to grain bank customers a firm should determine the place of the bank relative to total operations. Bank programs will vary, depending on whether they are intended to expand feed business, to provide alternative uses of storage space, or to provide for the complete integration of feed processing and storage. A firm survey should be made so that physical capacities are recognized. In that way the firm could determine where plant limitations exist and be able to estimate the capital changes necessary to provide an adequate bank program.

A survey of the trade area and potential feed bank clientele should also be made. Information regarding future feeding intentions, kinds of livestock, type of services desired and interest in grain banks is necessary to long range planning. A trade area survey together with the physical plant inventory would help determine the feasibility of a grain bank program.

Once it has been decided to operate a grain bank, specific policies should be established, preferably in written form. These policies should state exactly the kinds, qualities, and quantities of grain to be deposited; the disposition of substandard grain; the provisions for overdrawals and withdrawals of unprocessed grain; and the requirements regarding feed processing and delivery. The grain bank policy should also include charges for grain conditioning, handling, storage, processing and delivery. These policies should be available to potential customers.

Grain banking also requires careful bookkeeping. An adequate accounting system is a "must." The system should be set up so that it satisfies legal requirements, provides an accurate customer record, and gives the firm a cost guide that will enable it to evaluate and improve bank operations. The firm should also be certain that grain bank operations comply with the requirements of the state and federal warehousing laws and the feed control division of the state board of agriculture.

Establishment of good customer relations is necessary to grain banking. To promote confidence the firm should rigidly maintain its policies. The customer should be free to inspect both his accounts and the grain held in bank storage and used in feed processing. The basis of a good grain program is the customers' confidence in the dealer's integrity.

California Wages

SAN FRANCISCO — Production workers in grain mill plants held their average weekly earnings about even between March and April, but remained about $8.00 ahead of a year before. The respective figures were $112.41 in April, 1961; $112.44 in March, and $104.39 in April of last year. The average hourly earning figure was slightly lower in April than in March, $2.67 as compared with $2.69 and $2.54 the previous April.

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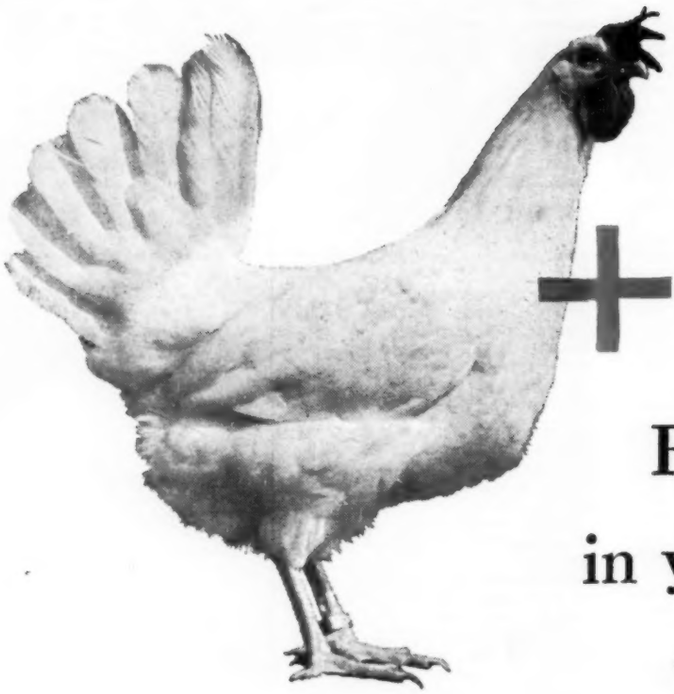

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EXPANDED FEED

(Continued from page 1)

further developments in this type of research.)

In the Delaware study, the expanded ration was compared with standard ground concentrates and proved significantly superior in growth, total digestible nutrients and in fiber digestibility, Mr. Burton told the dairy scientists.

Not only does grain digestibility improve but the hay fed with the expanded material was also digested more efficiently by the test heifers than by the heifers on the ground material.

Expanded grains appear to have a potential as a new feed process, Mr. Burton said. The potential of increasing digestibility by a simple mechanical process, he observed, has "some interesting possibilities."

Other members of the research team included Dr. Clyde R. Richards, Dr. George F. W. Haenlein, Dr. Morris S. Cover, all of the animal and poultry science department at the University of Delaware, and Howard C. Hoyt, agricultural engineer.

POULTS

(Continued from page 1)

appears, isn't going to stop for a while. USDA's count of turkey eggs in commercial incubators June 1 showed an increase of about 26% from a year ago. Only New England and the middle Atlantic states showed slight decreases.

The hatch of all heavy breed poults during May amounted to 19,993,000—an increase of 24% from May, 1960. USDA data show that the hatch of heavy white breeds was 45% greater in May, 1961, than in the same month last year. This is the same percentage of change reported for April. An 18% increase was recorded for other heavy breeds (mostly Broad-Breasted Bronze).

The hatch of light breed poults in May of this year totaled 1,923,000, up 18% from May, 1960.

Five-Month Comparisons

For the first five months of 1961 the hatch of heavy breed poults was up 27% from a year earlier—from 56,726,000 to 71,852,000. The gain for heavy white breed poults was recorded at 56%, while the hatch for other heavy breeds advanced 18%. An increase of 22% was reported for light breed poults, comparing January-May of this year with the same months in 1960.

All poults hatched January through May totaled 78,141,000, an increase of 26% from the 61,884,000 hatched during these months last year.

TURKEYS

(Continued from page 1)

tention is being paid to the facts of turkey slaughter and consumption.

"I don't think it would take much to kick the market up 5-6¢ lb.," commented a feed industry source. He said this could happen if chain stores would make turkey available to the consumer and if the government would buy some turkey.

"There is an immediate demand for consumer-size turkeys, but chain stores' shelves are bare," the same observer commented. "Consumption is higher than ever before. We expect to see the turkey supply cleaned up if the market doesn't rise too fast."

This demand is evident, he reasoned, because of stores providing fewer turkeys than asked for by the consumer, because of turkey slaughter being far ahead of last year and because of cold storage volume falling faster than a year ago. (Additional comments on storage and consumption appear in a Letter to the Editor on page 6.)

"Bottom of a Cycle"

Turkey prices, according to a Minnesota hatcheryman, have reached the bottom of a cycle. He says the turkey industry should have been prepared for the low prices which now exist. "We have found that if a producer can't operate on an average price of 24¢ lb. for his birds, he should get out of the business."

Minnesota turkey prices are now mostly in a range of 16-19¢. Costs of production, it was reported, vary from 16-22¢ for mature heavy breeds and 19-24¢ for fryer-roasters.

"In the past five years, once in every 12 months turkey prices have been down to 21¢ or less and up to 27¢ or more," said the hatcheryman. "This amounts to an average of 24¢ lb. That's why a grower should plan to operate on the basis of a 24¢ average."

The U.S. Department of Agriculture has reported that U.S. turkey prices in mid-May averaged 21.5¢, the lowest since 1942.

Some Concerned

It's evident that growers are concerned about the big expansion in turkey production because Feedstuffs has been told that some are cancelling poult orders. Some feed companies probably are less than optimistic, too, because there have been reports of firms holding back on credit for turkey production.

The anticipated increase this year of 25% in turkey production is not altogether undesirable in the eyes of feed manufacturers. This expansion, some say, means an increase in turkey feed volume.

Promotions Under Way

Because of the exceptionally large turkey crop, consumers are being reminded that turkey will be one of the best bargains in the market place (see page 77, this issue).

The industry is gathering its forces to tackle the job of merchandising an estimated 11 million more birds in the July-September quarter than it did last year. This may be possible, even at adequate profits to producers and other segments of the industry, because turkey consumption has increased at a faster proportionate rate than turkey prices have declined.

The National Turkey Federation's "crash" program for raising additional funds for turkey promotion continues to gain momentum as more and more state turkey associations rally to the cause.

NTF leaders have asked all state associations to pay an additional 25% of their regular Eat More Turkey campaign quotas. Funds received will be used to expand and accelerate turkey promotional programs aimed at getting consumers and mass feeding institutions to use more turkey this year.

An official of the U.S. Department of Agriculture indicated this week at the Western Poultry Congress in Sacramento, Cal., that the size of this year's turkey crop and "the successful experiences with the school lunch program over the past several years certainly favor the possibility that USDA might buy turkey for the schools again this year."

ALABAMA

(Continued from page 4)

them than wages. They are fairness, predictability and security.

"You probably don't realize that wages are seventh or eighth on the list of things employees consider important," he said.

The employee of today wants his boss to be interested in him. He may not be interested in the boss but the boss must be interested in the employee.

The industry should develop a plan of reviewing labor policies periodically and adopting changes the workers feel will improve working conditions.

"You may be surprised at what they are thinking. It could very well be something you consider insignificant and easily granted.

"Don't wait until you hear efforts are being made to unionize because you may be able to negotiate some changes that will forestall those union activities," he said.

CENTRAL SOYA

(Continued from page 1)

$1,180,266 earned in the third quarter a year ago.

For the nine-month period, net earnings were $3,565,648, compared with the $2,763,871 earned in the first nine months of the last fiscal year.

Net sales in the third quarter were $71,791,287, up substantially from the second quarter's $65,786,879. Sales over the nine-month period this year have amounted to $204,187,949, compared with $207,767,753 last year.

Per share earnings for the third quarter were 45¢ (based upon 2,802,765 shares outstanding on May 31), an increase of 2¢ over the second quarter and of 3¢ over last year's third quarter per share earnings.

CHICKS

(Continued from page 1)

bators June 1 shows a 20% reduction compared with a year earlier. Only the Rocky Mountain states had more egg-type eggs in incubators on that date than they did a year earlier.

Broiler-Type Situation

Egg-type chick production is not alone in its sharp adjustment to low prices of poultry industry end products.

Although production of broiler-type chicks in May was up 9% from a year ago to a record level for the month, USDA data indicate that the big boom in hatchings is settling down—as a result of the demoralizing prices of recent weeks.

The combination of significant cutbacks in both broiler-type and egg-type chicks last month resulted in a total chick hatch of 297,838,000, just 1% larger than in May a year ago. In April the difference was 18%.

Egg-Type Details

The big cut in egg-type production last month—about 17% fewer chicks were hatched in May than in April—pulled the 1961 egg-type total for January-May down to only 9% greater than the 1960 total for the same period. At the end of April the 1961 cumulative figure was 19% above 1960's.

Ever since January—when commercial hatcheries turned out 41% more egg-type chicks than they did a year earlier—and until May, month-by-month hatchings were larger than in 1960, but the degree of increase was cut each month.

Evidence of Cutback

In April, the biggest hatching month for broiler-type chicks this year, broiler-type chick output was a fourth larger than it was in the same month a year earlier.

Now comes the June 16 USDA hatchery production report which says broiler-type hatchings last month amounted to 212,759,000 chicks. That figure is 9% bigger than the total for May of last year, but the percentage of difference is far less than for the month before.

May broiler-type production boosted the cumulative total for 1961 to 978,694,000. That's 115,205,000 more than the January-May total of 1960.

Additional evidence of the broiler expansion bull pulling in its horns and of 1961 broiler-type chick production moving closer to 1960 output is shown in figures which say eggs in incubators on June 1 were only 5% greater in number than a year earlier. This means the June hatch of broiler-type chicks may be only slightly larger than the hatch in June last year.

While New England, the middle Atlantic and east north central states had 5-7% fewer broiler-type eggs in incubators June 1, other regions reported increases ranging from 2 to 19%.

THEY DROP BOMBS ON THEIR EGGS

DES MOINES—An "egg bomber" is an essential part of the equipment of the laboratory at the Hy-Line Poultry Farms Research Center near here.

The bombing device consists of an electro-magnet and a series of graduated ball bearings which are dropped onto eggs to determine shell strength. The ball bearings are placed on the cross-arms of a wheel, picked up by the electro-magnet and dropped between the cross-arms onto the eggs in a chamber below with the touch of an electric button by a skilled operator.

GRAIN

(Continued from page 1)

Grain shippers have agreed upon emergency measures which will involve building a road around the north end of the dam and providing docking and loading facilities. This will mean grain will have to be unloaded from barges at one side of the dam, then trucked around the dam and reloaded on barges en route to the ports of Guntersville and Chattanooga.

Traffic through Wheeler Dam was halted June 2 when a section of the huge dam's locks collapsed. The accident resulted in a stalemate of shipments of grain to the feed mills in northern Alabama as well as Georgia. The grain normally is unloaded at Guntersville and Chattanooga and trucked to mills throughout the area.

The TVA also said it is installing pipelines around the dam to handle shipments of molasses and soybean oil as well as other liquids. Two 12-inch pipelines around the dam and about seven lines over the dam are being installed as rapidly as possible.

Meanwhile, the TVA said, work will go forward on establishing arrangements to trans-ship grain over the dam by means of two "marine legs." The TVA will provide and install this equipment, which will be operated by the grain companies.

To handle the operation, the Upper Tennessee River Grain and Feed Ingredients Receivers Association, Inc., was formed. Paul Newsome, Consolidated Blenders, Inc., Fremont, Neb., is chairman of the board.

The TVA hopes to have the first "marine leg" installed and in operation in about 30 days.

The road around the dam will be about a mile long, the TVA said.

Collapse of the dam's locks was a blow to the grain and feed industry, which suddenly had to shift to other means of transportation to take care of immediate needs. Grain prices jumped about 10¢ bu. to take care of the increased transportation costs, mostly truck.

The temporary arrangement is expected to last for several months inasmuch as the TVA said it would require six to eight months to repair the locks so that barges can move through again.

A minimum charge of 2¢ a barrel will be charged to transfer the liquids from barges at the lower end of the dam to other barges above the dam for shipments destined to Guntersville and Chattanooga. Three cents a barrel will be charged for use of steam facilities to heat such liquids as molasses.

The maximum rates will be 5¢ a barrel and 7¢ for transfer and steam facilities.

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bulk, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

ALFALFA MEAL

Ft. Worth: Demand good for dehydrated, slow for suncured; trend steady; supply sufficient; sacked: dehydrated, 17%, 100,000 A $46@47, truck or rail, unchanged; suncured: 13%, ¼-in. grind, No. 1 $42, truck, unchanged.

Los Angeles: Demand slow; supply ample; trend easier; dehydrated meal, 17% protein, 100,000 A $50@51; dehydrated pellet meal, 17% protein, 100,000 A $52@54; suncured meal, 15% protein $42@43; suncured crumbles, 15% protein $44@45, all down $1.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A pellets $47@48, unchanged.

Memphis: Demand fair; trend steady; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $41.50, down 50¢; ground pellets $44.60, down $1.

St. Louis: Demand good; trend easy; supply ample; dehydrated, 17% protein, 100,000 units of vitamin A, pellets $40.50, down 50¢.

Boston: Demand slow; trend easier; supply ample; dehydrated, 17%, pellets $51, off $2.50; suncured, 13% $45, unchanged.

Minneapolis: Demand good; supplies plentiful; prices steady; 17% dehydrated, 100,000 units vitamin A reground pellets $44; oiled reground $45.

Kansas City: Demand fair; trend steady; supply adequate; 17% dehydrated alfalfa, 100,000 A pellets $38@40, reground pellets $39@41; 18% dehydrated alfalfa, 125,000 A pellets $40@43, reground pellets $41@44; 20% dehydrated alfalfa, 150,000 A pellets $47@48, reground pellets $48@49, unchanged.

Portland: Demand fair; trend steady; supply adequate; 15% suncured $41; 20% dehydrated pellet meal $71.

Chicago: Demand improved; trend up $1; supply moderate; dehydrated, 17% protein, 100,000 units vitamin A $43.

Buffalo: Demand fair to poor; trend lower; supply adequate; $56.10, sacked, Boston, off $5.

Denver: Demand fair; trend steady; supply ample; dehydrated $42.

Seattle: Demand fair; trend easy; supply ample; suncured 15% protein $38, Seattle, unchanged (new crop); dehydrated 150,000 A units $67, Seattle, unchanged (new crop).

ANIMAL FAT (STABILIZED)

San Francisco: Demand fair; supply ample; trend down; bleachable fancy 6½¢ lb.; yellow grease 5¾¢ lb.

St. Louis: Demand fair; trend weak; supply ample; yellow grease 5¾¢ lb., delivered, tank cars or trucks, down ⅜¢ lb.

Memphis: Demand fair; trend easier; supply adequate; yellow grease 6½¢ lb., down ¼¢; prime tallow 6½¢ lb., down ¼¢.

Ft. Worth: Demand fair; trend lower; supply moderate; prime tallow, tank cars 6¼¢ lb., drums 7¾¢ lb., f.o.b. north Texas packing plants with returnable drums, down ¾¢.

Los Angeles: Demand and supply limited; trend firmer; 6½¢ lb., up ¼¢.

Boston: Demand poor; trend weak; supply plentiful; tallow 5¼¢ lb., off ¼¢; yellow grease 5⅝@5¾¢ lb., off ¼¢.

St. Paul: Demand good; supplies ample; trend firming; price off ¼¢ to 6¢ lb., f.o.b. producer's plant.

Chicago: Demand quiet; trend down 12½¢; tank truck or carlots, bleachable fancy tallow $6.12½ cwt., yellow grease $5.50 cwt.

Atlanta: Demand good; trend steady; supply limited; 7½¢ lb., f.o.b. processing plants.

BARLEY FEED

San Francisco: Demand fair; supply ample; trend steady; rolled $61, ground $60, both unchanged.

Los Angeles: Demand better; supply adequate; trend steady; $2.45 cwt., unchanged.

Boston: Demand slow; trend easy; supply adequate; $45, sacked, off 50¢.

Chicago: Demand fair; trend steady; supply adequate; $34, sacked.

Baltimore: Demand quiet; trend firm; supply fair; $44.50, sacked.

Denver: Demand fair; trend steady; supply short; $2.45 sacked; $2 bulk.

Seattle: Demand fair; trend firm; supply limited; $46, truck lots, down $1.

BLOOD MEAL

San Francisco: Demand and supply fair; trend steady; $6.50 a unit of ammonia, sacked, unchanged.

Los Angeles: Demand fair; trend steady; supply tight; $5.50 a unit of ammonia, sacked, unchanged.

Chicago: Demand slow; trend down $2.50; supply ample; 80% protein $130, sacked.

BONE MEAL (STEAMED)

Los Angeles: Demand good; trend steady; supply ample; imported $80, 20 ton lots, sacked, down 50¢.

Cincinnati: Demand good; trend steady; supply ample; $95, sacked, Cincinnati, up $5.

San Francisco: Demand good; supply ample; trend steady; $75.

Ft. Worth: Demand fair; trend steady; supply sufficient; domestic, sacked $100, f.o.b. Ft. Worth, unchanged.

Boston: Demand and supply steady; trend steady; $105, unchanged.

Chicago: Demand slow; trend down $5; supply fair; $95, sacked.

Buffalo: Demand good; trend steady; supply fair; $105, sacked, f.o.b. Buffalo, unchanged.

Denver: Demand light; trend steady; supply ample; $103, delivered.

Seattle: Demand fair; trend steady; supply good; $92, f.o.b. car Seattle, sacked, unchanged.

BREWERS DRIED GRAINS

Ft. Worth: Demand slow; trend steady; supply sufficient; 26% protein $50.50, sacked, unchanged.

San Francisco: Demand fair; supply ample; trend steady; $51, sacked, unchanged.

Los Angeles: Demand good; trend steady; supply adequate; $50, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $42, unchanged.

St. Louis: Demand fair; trend steady; supply ample; 26% protein $36, down $1.

Boston: Demand good; trend steady to firm; supply fair; $45.50, 50¢ higher to 50¢ lower.

Chicago: Demand and supply fair; trend steady; 26% protein $35@36.

Buffalo: Demand fair to good; trend steady; supply good; $46, Boston, unchanged.

BREWERS DRIED YEAST

Cincinnati: 9@10¢ lb., sacked, unchanged.

Los Angeles: Demand good; trend steady; supply limited; 10¢ lb., 5 ton lots; 11¢ lb., 1 ton lots; 12¢ lb., less than ton lots; both sacked and unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; 11½¢ lb., ton lots, sacked, unchanged.

San Francisco: Demand fair; supply good; trend steady; 10¢ lb., sacked, unchanged.

Boston: Demand and supply steady; trend steady; 11¢ lb., unchanged.

St. Louis: Demand fair; trend firm; supply ample; 9½@10¢ lb., carlots, sacked; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.

Chicago: Demand fair; trend steady; supply ample; 9½@10¢ lb., carlots, sacked; 9¾@12½¢ lb., l.c.l.

Milwaukee: Demand fair; trend steady; supply ample; 10½@12½¢ lb., ton lots, sacked.

Buffalo: Demand little slower; trend steady to slightly firmer; supply ample; $8.80 cwt., Boston, up 5¢.

Seattle: Demand slow; trend steady; supply ample; $12 cwt., sacked.

CALCIUM CARBONATE

Ft. Worth: Demand normal; supply sufficient; trend steady; $4.50@5, f.o.b. north Texas, unchanged.

Los Angeles: Demand fair; trend steady; supply adequate; flour $9.85, 20 ton cars; meal $10.20, 20 ton cars; both sacked and unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $7@7.50 cwt., unchanged.

Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100 lb. bags $9.54; bulk, in hopper cars $7.54; bulk in boxcars $8.04; granular grind $1 premium.

Minneapolis: Fine grind, 50 lb. bags $13.75; 100 lb. bags $13; bulk, boxcar $11.50; bulk, hopper $11; coarse grind $1 premium, delivered Minneapolis.

Denver: Demand and trend steady; supply ample; $12.50, carload.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, sacked.

COCONUT OIL MEAL

San Francisco: Demand fair; supply ample; trend steady; solvent $52, unchanged.

Los Angeles: Demand and trend steady; supply moderate; copra cake $65, unchanged.

CONDENSED FISH SOLUBLES

Boston: Demand and supply good; trend firm; $45, up $5.

Ft. Worth: Demand fair; supply unobtainable for nearby position; tank car, West Coast production, nominal $4.41 cwt.; dried fish solubles, nominal $151.60, unchanged.

Los Angeles: Demand good; trend steady; supply limited; 3¼@3½¢ lb., unchanged.

Denver: Demand good; trend steady; supply ample; 3½¢ lb., West Coast.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are bulk basis, sacked basis $6 more)

Minneapolis: Feed $41.70, meal $78.70.
Atlanta: Feed $45.10, meal $82.10.
Birmingham: Feed $42.90, meal $79.90.
Boston: Feed $46.60, meal $83.60.
Chicago: Feed $35, meal $72.
Cleveland: Feed $43, meal $80.
Denver: Feed $45.30, meal $82.30.
Ft. Worth: Feed $43.80, meal $80.80.
Indianapolis: Feed $40.25, meal $77.25.
Kansas City: Feed $35, meal $72.
Louisville: Feed $41.55, meal $78.55.
New York: Feed $46.20, meal $83.20.
New Orleans: Feed $45, meal $82.
Norfolk: Feed $45.60, meal $82.60.
Philadelphia: Feed $45.80, meal $82.80.
St. Louis: Feed $35, meal $72.

CORN OIL MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $42, unchanged.

Portland: Demand slow; trend steady; supply adequate; 41% solvent $63.

Seattle: Demand fair; trend firm; supply tight; solvent type $70, f.o.b. car Seattle, sacked, unchanged.

Seattle: Demand good; trend steady; supply ample; $54 car, up 50¢.

COTTONSEED OIL MEAL

Los Angeles: Demand and trend steady; supply adequate; $60, unchanged.

Cincinnati: Demand poor; trend steady; supply adequate; $68, up 40¢.

Ft. Worth: Demand fair; trend slightly stronger; supply adequate on meal, scarce on hulls; 41% old process $56@58, f.o.b. mills Ft. Worth, unchanged to up $1; pellets $2 additional; hulls $16@17, up $1.

San Francisco: Demand fair; supply ample; trend firm; 41% $67.20, 44% $71.20, both unchanged.

St. Louis: Demand good; trend firm; supply limited; 41% solvent process $61, Memphis, up 50¢.

Memphis: Demand fair; trend steady to higher; supply light but sufficient; prime 41% protein, old process $62, up $2; new process, 41% protein, none available.

Chicago: Demand better; trend up $1.50; supply light; Memphis basis, hydraulic $62.50.

Kansas City: Demand slow; trend steady; supply ample; 41% solvent process $61.80, down $1; 41% old process $61.50@62, unchanged.

Portland: Demand fair to slow; trend steady; supply adequate; $72.20@74.20.

Buffalo: Demand poor; trend steady to higher; supply fair to poor; $82.25, sacked, Boston, up $1.

Denver: Demand fair; trend steady; supply ample; $61.50.

Seattle: Demand fair; trend steady; supply limited; 41% expeller $71, f.o.b. car Seattle, unchanged.

Atlanta: Demand fair; trend steady; supply limited; 41% $61, f.o.b. Mississippi producing mills.

CURACAO PHOSPHATE

New York: Minimum 14% phosphorus $43.50 sacked, $40.50 bulk, f.o.b. New Orleans, Jacksonville and Philadelphia.

DEFLUORINATED PHOSPHATE

Ft. Worth: Demand fair; trend steady; supply sufficient; minimum 18¼% phosphorus, maximum 31% calcium, maximum .18% fluorine $76.65, sacked, unchanged.

Cincinnati: 18% phosphorus, carlots $74.30, ton lots $84.30; 14% phosphorus, carlots $62.50, ton lots $72.50, f.o.b. Cincinnati, unchanged.

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $61.25, sacked, 100 lb. multiwall bags, bulk $58.25; truck load $62, sacked, in 100 lb. multiwall bags, bulk $59, f.o.b. Coronet, Fla.

Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 25%, maximum fluorine .14% $52, f.o.b. Tupelo in 100 lb. multiwall bags, $49 bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $56 (or $3.67 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.

Butte, Mont.: Minimum phosphorus 18%, minimum calcium 32%, maximum calcium 36%, maximum fluorine .18% $81 (or $4.50 per unit of P), f.o.b. Butte, 100 lb. multiwall bags; bulk $78; truck lots of less than 10 tons $10 more, bagged or bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $69.35 net ton, f.o.b. Houston, 100 lb. multiwall bags; $66.35 bulk ($3.65 per unit of P).

DICALCIUM PHOSPHATE

Los Angeles: Demand slow; trend unchanged; supply adequate; 18½% phosphorus $95.10, sacked, unchanged.

Ft. Worth: Demand fair; trend steady; supply adequate; $81.50, sacked, unchanged.

Cincinnati: 18½% phosphorus $88.80, bagged in carloads; $98.70, bagged in ton lots, f.o.b. Cincinnati; $81, f.o.b. production points, unchanged.

Trenton, Mich.: 18½% P $83, bulk, boxcar/hopper car; $86, bagged, in less than carload lots; 21% P, $94.05, bulk, boxcar/hopper car; $97.65, bagged, in carloads or truck loads; $107.45, bagged, less than carload; all prices f.o.b. Trenton, freight equalized with nearest producing point.

Chicago: Bulk, carlots and truck loads, 18½% phosphate $78 and 21% phosphate $89; packed in 100 lb. papers, 10 tons or more, 18½% phosphate $81 and 21% $92; lesser quantities, 18½% phosphate $91 and 21% $102; above prices per ton, f.o.b. Chicago Heights, Ill., or Nashville, Tenn.

Bonnie, Fla.: Minimum phosphorus 18½%, granular, $81 (or $4.38 unit of P), freight equalized from nearest producing point, carload basis; bulk carloads $3 less; in truck loads of less than 10 tons, $10 more. Western slope prices, for delivery at established railroad stations and by truck at regular feed mixing plants: California, Arizona, Nevada and Utah, $99.90; Washington, Oregon, Montana and Idaho, $107.15; bulk carloads $3 less; truck loads less than 10 tons, $10 more.

Columbia, Tenn.: Minimum phosphorus 18.5%, minimum calcium 34% $81, f.o.b. Columbia, in 100 lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Texas City, Texas: Minimum phosphorus 18.5%, minimum calcium 29%, maximum calcium 33%, maximum fluorine .12%; carload and truck load $75.50, sacked, in 100 lb. multiwall bags, bulk $72.50, f.o.b. Texas City.

Denver: Demand good; trend steady; supply ample; $88.50.

Seattle: Demand good; trend steady; supply limited; $91, ex-dock Seattle, sacked, unchanged.

Buffalo: Demand fair to good; trend steady; supply adequate; $82.93, f.o.b. Buffalo, unchanged.

DISTILLERS DRIED GRAINS

Cincinnati: Demand fair; trend steady; supply adequate; $53, down $2.

San Francisco: Demand fair; supply ample; trend steady; solubles $79, sacked, unchanged.

Louisville: Demand fair; trend steady; supply lower; bourbon grains, dark $53, sacked and packed, f.o.b. Louisville, light $1@3 less; solubles unchanged at $73, bulk prices about $5 less, based on sacking cost.

Boston: Demand good; trend firm; supply spotty; domestic, none offered; Canadian $61@63.

Buffalo: Demand fair to good; trend higher; supply poor; $68, Boston; comparison unavailable because of previous scarcity.

Seattle: Demand good; trend firm; none available; $71, delivered truck lots, sacked, unchanged.

DRIED BEET PULP

San Francisco: Demand good; supply fair; trend steady; $45.50, unchanged.

Los Angeles: Demand and trend steady; supply adequate; $44.90@45.20, unchanged.

Boston: Demand slow; trend easy; supply adequate; sacked $64.70, down $2.25.

Denver: Demand light; trend steady; supply scarce; $60.

Seattle: Demand good; trend steady; supply ample; $49, delivered carlots, sacked, unchanged.

Atlanta: Demand fair; trend steady; supply short; $63.50, sacked, delivered.

Portland: Demand fair; trend steady; supply adequate; $47.58.

Buffalo: Too scarce to quote.

DRIED BUTTERMILK

Los Angeles: Demand fair; trend steady; supply light; 13¾@14¢ lb., unchanged, sacked.

San Francisco: Demand fair; supply ample; trend steady; 13½¢ lb., sacked, unchanged.

Boston: Demand and supply steady; trend steady; 14¢ lb., unchanged.

Buffalo: Demand only fair; trend steady; supply adequate; $10.60 cwt., Boston, unchanged.

Chicago: Demand slow; trend unchanged; supply ample; medium acid $9.75@10.25 cwt., sweet cream $9.75@10.25 cwt., both sacked.

DRIED CITRUS PULP

Boston: Demand good; trend firm; supply fair; $55.20, sacked, up $1.55.

San Francisco: Demand and supply fair; trend steady; meal $48, sacked, unchanged.

Los Angeles: Demand and trend steady; supply limited; orange pulp $43, lemon pulp $41, both unchanged.

Atlanta: Demand fair; trend steady; supply good; pulp $37.50, meal $35, both sacked, f.o.b. Florida processing plants.

Buffalo: Demand and supply fair to poor; trend higher; $37.50, sacked, f.o.b. Florida points, up $2.50.

DRIED SKIM MILK

Ft. Worth: Demand fair; trend steady; supply moderate; $15.65 cwt., sacked, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 12@13¢ lb., sacked, unchanged.

San Francisco: Demand and supply fair; trend steady; 14½¢ lb., sacked, unchanged.

Los Angeles: Demand slow; trend steady; supply adequate; 14¢ lb., less than ton lots; 13¾¢ lb., ton lots; both sacked and unchanged.

Boston: Demand good; trend firm; supply tight; 13½¢ lb., unchanged.

Chicago: Demand and supply fair; trend steady; $11.50 cwt., sacked.

Minneapolis: Price holds firm at $12 cwt.

Buffalo: Demand and supply fair; trend steady; spray $11.45 cwt., Boston, unchanged.

DRIED WHEY

Ft. Worth: Demand fair; trend steady; supply adequate; standard $4.75, sacked, truck or rail, delivered Ft. Worth; small lots $5.25, f.o.b. warehouse, Ft. Worth, unchanged.

San Francisco: Demand and trend steady; supply good; $5.25 cwt., sacked, unchanged.

Los Angeles: Demand fair; trend steady; supply adequate; $5.18 cwt., carloads; $5.35 cwt., l.c.l.; both sacked, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $5.75 cwt., sacked, unchanged.

Boston: Demand active; trend steady; supply good; 5¼¢ lb., unchanged.

Denver: Demand and trend steady; supply ample; $6.20 cwt.

Seattle: Demand steady; trend easy; supply good; $5.85 cwt., ex-warehouse, l.c.l., unchanged.

Chicago: Demand quiet; trend firm; supply fair; $4.75@5 cwt., sacked.

Minneapolis: Demand steady; supplies still limited; price steady at $4.75, f.o.b. shipping points.

Kansas City: Demand slower; trend steady to weaker; supply ample; $4.75 cwt., sacked, down 25¢.

FEATHER MEAL (HYDROLYZED)

San Francisco: Demand and supply fair; trend firm; $95, sacked, unchanged.

Los Angeles: Supply nominal; $1 a unit of protein, sacked, unchanged.

Ft. Worth: Demand good; trend lower; supply scarce; 85% protein, nominal $84@88, down $1.

Boston: Demand steady; trend firm; supply short; $90, unchanged.

Atlanta: Demand good; trend steady; supply short; $84, f.o.b. Georgia and Alabama processing plants.

FISH MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $108.10, unchanged.

San Francisco: Demand fair; supply ample; trend firm; $1.85 a unit of protein, unchanged.

Ft. Worth: Demand good; trend steady;

(Turn to QUOTES, page 92)

Major Markets Roundup

Ingredient Market Continues Sluggish

Trading in feed ingredients continued sluggish this week with more commodities registering losses than gains. The index of all feedstuffs was off 0.2, according to figures from the U.S. Department of Agriculture.

Many protein ingredients and the millfeeds were weaker during the week ended June 20 (see table). Although soybean meal showed up some stronger in the tables for that period, there was a reported falling off in price later in the week. Linseed meal showed some advances on the strength of export sales reports later in the week.

There was some talk that middling prices might advance due to the shipping strike affecting cuts in flour milling runs.

East

BOSTON: The local millfeed market continued to pursue an irregular course reflecting only a spotty buying interest which was generally confined to immediate or nearby requirements. Price changes were not as broad as in recent weeks, suggesting that sellers were not inclined to force sales while potential buyers were conservative in their inquiries.

Dealers reported that poultry and hog feeds comprised most of the sales, although the former was more restrained, indicating flock liquidation and a reluctance to add more broiler holdings in view of current marketing conditions. In the dairy and cattle lines activity was slow as pasturage conditions are currently described as excellent.

BUFFALO: Ingredient prices, with some exceptions, continued to give ground in a generally quiet demand. Corn declined 1 to 2¢ under the weight of heavy Commodity Credit Corp. offerings. Oats were unchanged to ½¢ lower, and feed wheat and barley were steady.

Animal tallow "took another beating" and was down ¼¢ to 6¼¢ lb. Vegetable proteins, however, managed to rally, with soybean oil and cottonseed oil meal up $1 and linseed oil meal up $2.

Alfalfa meal fell $5 in a seasonal slump, and hominy feed eased 50¢ in sympathy with corn. Brewers' grains were steady and distillers' grains were marked up after being too scarce to quote for several weeks.

Millfeed trading was extremely quiet. Bran held steady, but middlings ran into an unexpected slump and fell $2.50 as demand for mash dried up. Red dog was confused and quoted at various prices.

Midwest

CINCINNATI: The ingredient market was in the doldrums this week, with business generally being held to the volume of production needed to fill spot orders. Manufacturers and brokers ascribed a variety of reasons to this situation, with the usual "too high prices for components" taking most of the blame.

Following price declines during the last two weeks, steamed bone meal moved up $5, while other price advances included: Screenings, $1 to $2; cottonseed oil meal, 40¢, and bran, $1.

On the downside were: Distillers dried grains, $2; meat and bone meal, $1; tankage, $1; hominy feed, $1; linseed oil meal, $1.50, and middlings, $1.

MINNEAPOLIS-ST. PAUL: Trading was on the quiet side in the ingredient market here this week. Most prices were lower.

Leading the decline once again were the high protein ingredients. Tankage tumbled $3 to $4 and animal fat dropped another ¼¢ to 6¢ lb. where it seemed to be firming. Soybean meal was off 50¢ to $1.

The price of crimped oats was off $1 to $59 for sacked.

Bucking the general down trend were Canadian screenings and fish meal. Canadian unground screenings were up 50¢ to $14.50. Fish meal was up $1 to $142 on the West Coast blended and up 5¢ to $1.75 a unit on Canadian herring.

CHICAGO: Soybean meal broke from $1 to $2.50 per ton in the cash market during the week while in the case of the meal futures, the July was also down about $2.50. In the cash department, it was the 50% protein meal that sustained the greatest loss . . . unrestricted was down to $69.50 per ton and the ETL was off to a greater degree at $65.50 per ton.

Losses in the 44% protein ranged from $1 on the unrestricted to $2 on ETL. In the futures section, volume of trade held up fairly well but did not quite touch the previous week's total.

The Census Bureau monthly release covering the May crush showed production of 781,100 tons of meal vs. 759,000 and 757,000 tons respectively in April this year and May, 1960. Stocks of meal in processors' warehouses were reduced a little at 212,500 tons vs. 218,300 tons a month earlier and well over the year ago total of only 34,900 tons.

However, in view of the fact that there was an actual cut of 5,800 tons in the stock figure and after making allowance for the larger production in May than in April, the figures showed that there was a net reduction of close to 29,000 tons in processor holdings of meal the end of May as compared with a month earlier.

ST. LOUIS: Ingredient prices moved within a narrow range last week with small declines predominating. Trading was rather quiet and feed manufacturers continued their cautious attitude on forward purchasing.

The animal fat market was characterized by another decline of ⅜¢ lb. which buyers attributed to the lack of export demand and easiness in fats and oils.

Dehydrated alfalfa meal became more plentiful due to good weather over last week end which gave mills an opportunity to get into heavier production. Although quality has improved a shade, 20% meal was not overly plentiful.

Soybean meal has been up and down during the week but closed unchanged. Prices are still considered on the easy side, with ample supplies on the market. Some buyers said processors were willing to look at bids, if not too far away from quotes. On the other hand cottonseed meal was firm and higher. With not too many cotton processors still in operation, prices seemed headed higher.

South

LOUISVILLE: The direction prices of distillers' dried grains will take during the next two to three months remains in doubt. Some think prices may go up $3 to $5.

It is claimed that there is no surplus and that stocks have been sold by the distillers, with virtually no production July through mid-September. However, the grass is lush and it is a dull season for feeds. So, it is difficult to venture a guess as to which way the prices of distillers' dried grains will move.

MEMPHIS: Prices of ingredients on the Memphis market this week showed little change from last week's irregular movement. Demand ranged from fair to poor.

Demand for alfalfa meal was somewhat improved.

The soybean oil meal demand was poor, although local production was favorably priced in relation to Decatur. Mills evidently are working off inventory wherever possible.

The supply of cottonseed oil meal was light and only sacked meal was available as mills have shut down for the season. Bulk buyers are obtaining supplies from Mississippi and Arkansas. The demand, however, is considered only fair.

Millfeeds, after trying to move up in price, fell back early in the week. Some weakness was due to a shipping strike which cut off export flour movements. Demand is fair on bulk middlings but poor on sacked feeds.

Unrestricted soybean oil meal closed June 20 75¢ to $1.85 per ton higher, with bulk solvent cottonseed oil meal unchanged to 25¢ per ton higher.

Trading volume for the week on unrestricted soybean oil meal was light.

Southwest

KANSAS CITY: Major ingredient prices were generally lower this week with soybean meal and millfeeds being the big losers.

Soybean meal was down $2 for the week with spot supplies under pressure again and mixers continuing to take only their immediate needs. Linseed meal prices were supported by reports of some export sales which pushed prices up 50¢ to $1 but did little to stimulate demand. Cottonseed meal and animal proteins were steady with supply and demand in good balance.

Millfeeds were steady to weaker with sacked bran and shorts in fair demand and holding close to last week's prices but bulk middlings were off sharply with losses extending to $3.50 in extremes with takings small but mixer interest picking up at the bottom levels.

Alfalfa meal production was slightly better due to improved weather conditions but demand continued to absorb the offerings with prices steady. There were some future alfalfa meal sales which figured on a carrying charge basis over the spot.

FT. WORTH: Soybean meal was a little stronger in this market than at the same time last week. Nearby shipment 44% was unchanged to $1 higher but August shipment was up $3.50 to $4, and 50% protein in all positions was $3 to $4 higher. Cottonseed meal was showing a little strength and was as much as $1 higher, while the hulls were not so plentiful and up $1 to $2.

Vegetable and animal fats continued to decline the past week and were ½¢ to ¾¢ lower. Bran and shorts were $1.50 to $2 down and oat millfeed $1 lower. Meat and bone meal was a shade easier but quoted unchanged. Other ingredients were unchanged for the week.

Suppliers of ingredients had experienced some increase in purchase

Feeds: Average Bulk Prices and Index of Weighted Prices*
(Dollars per ton)

	June 20, 1961	June 13, 1961	Change from previous week
OILSEED MEALS			
Prices at prin. mkts.:			
Soybean meal	74.40	73.80	+ .60
Cottonseed meal	63.30	62.80	+ .50
Linseed meal	60.35	60.35	...
Copra cake or meal	58.55	58.50	+ .05
Peanut meal	62.50	63.00	— .50
Index	91.5	90.8	+ .7
ANIMAL PROTEIN FEEDS			
Prices at prin. mkts.:			
Meat meal	91.75	91.95	— .20
Tankage	89.50	90.00	— .50
Fish meal	113.60	113.65	— .05
Index	83.0	83.2	— .2
GRAIN HIGH-PROTEIN FEEDS			
Prices at prin. mkts.:			
Gluten feed and meal	48.15	48.15	...
Dist. dried grains	57.20	57.70	— .50
Brewers dried grains	40.40	40.65	— .25
Index	76.2	76.4	— .2
WHEAT MILLFEEDS			
Prices at prin. mkts.:			
Bran	35.90	37.05	—1.15
Midds. and shorts	39.55	40.85	—1.30
Index	68.1	70.4	—2.3
OTHER MILLFEEDS			
Prices at prin. mkts.:			
Hominy feed	41.85	41.60	+ .25
Rice bran	30.00	30.00	...
Index	64.3	63.9	+ .4
ALFALFA MEAL			
Prices at prin. mkts.	46.35	46.35	...
Index	89.2	89.2	...
MOLASSES, FEEDING			
Prices at prin. mkts.	28.19	28.44	— .25
Index	83.9	84.6	— .7
ALL FEEDSTUFFS			
Index	83.0	83.2	— .2
FEED GRAINS			
Prices at prin. mkts.:			
Corn	38.70	39.20	— .50
Oats	43.60	43.40	+ .20
Barley	40.50	39.90	+ .60
Grain sorghums	42.00	42.30	— .30
Index	63.1	63.7	— .6

*Base period of index is 1947-49.
Source: USDA.

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interest by feed mills but the recent general rains have slowed things down again.

West

SEATTLE: The grain markets were again on the quiet side. Barley was down $1 per ton to $46. Oats were again unchanged at $56. Milo firmed $1 to $52.50, and corn was up 50¢ to $54.

The concentrate market fluctuated in a narrow range. Soybean oil meal closed up about $1 to $89.20. Forty-one per cent expeller cottonseed meal was again unchanged at $71.50. Forty four per cent solvent cottonseed meal was also unchanged at $77. Linseed meal was again off the market. Copra meal was still quoted at $70 sacked but was in short supply. The demand for vegetable proteins is at a minimum due to the fact that daily feeding is at its lowest ebb because of lush pastures throughout the state. Meat meal was once again unchanged at $1.90 per unit, however most feed manufacturers are using a better percentage in their feeds once again. Herring meal had a weak undertone and was off 5¢ per unit to $1.85 per unit f.o.b. Vancouver, B.C.

PORTLAND: Prices for major feed ingredients closed this week unchanged to lower in the face of a moderately slow trade which saw the general demand limited to nearby requirements of most feeders and mixers.

Quotations for whole feed grains were generally unchanged from the previous period while meat and bonemeal quotes closed unchanged to $2.50 a ton lower with nearby fish meal selling 5¢ a protein unit down.

Blackstrap molasses values declined 50¢ a ton. Cottonseed meal trading finished with a narrower range evident in prices quoted resellers and processors.

Wheat millfeed prices closed 50¢ a ton lower under a narrow call for limited available offerings.

Other Reports

ALFALFA MEAL: Because of the arrival of additional survey returns, the American Dehydrators Assn. this week revised its May 31 dehy inventory report. Here's what ADA's survey showed for three general regions:

Rocky Mountains to Mississippi River—50,500 tons in stock May 31, down 28.9% from a year earlier.

East of Mississippi River—19,193 tons, up 11.8% from 1960.

West of Rocky Mountains—18,173 tons, up 4% from 1960.

Total—87,866 tons, down 16.85% compared with a year earlier.

ALFALFA MEAL: May, 1961, production of alfalfa meal—both suncured and dehydrated—amounted to 133,400 tons, the U.S. Department of Agriculture reports. This preliminary total was about three time greater than April production, but about 22% under output in May a year ago.

Suncured output last month has been estimated at 12,200 tons, 1,900 tons under output in the same month a year earlier. Last month's dehy output of 121,200 tons (preliminary estimate) was 37,000 tons less than in May of 1960. The revised dehy output figure for April has been placed at 31,500 tons.

Stocks of alfalfa meal at producing plants May 31, 1961, amounted to 114,300 tons, compared with 149,400 tons a year earlier. The dehy comparison is 106,300 tons for May 31, 1961, stacked against 140,900 tons for the same date last year.

On April 30 of this year, dehy stocks accounted for 83,900 tons of the 93,600 tons reported for all alfalfa meal.

FISH MEAL: The U.S. Bureau of Commercial Fisheries says domestic production of fish meal and scrap in 1960 amounted to 290,000 tons—down 17,000 tons or about 6% compared with 1959.

With the exception of tuna, mackerel and sardines, production of all types of meal and scrap declined. Menhaden meal (218,000 tons) made up about 75% of the 1960 production.

Yield of solubles and homogenized-condensed fish amounted to 99,000 tons in 1960—a sharp drop of 66,000 tons or 40% compared with 1959. The Bureau of Commercial Fisheries says some firms added solubles to their meal because of depressed market conditions of meal and solubles in 1960.

Imports of fish meal amounted to 131,561 tons last year, 1,364 tons less than in 1959.

MOLASSES: Restrictions on trading with unfriendly Cuba show up in the U.S. Department of Agriculture's April report on imports and exports of industrial and feed molasses.

For one thing, Cuba is not listed as a principal source of imports. For another, April imports of 25.5 million gallons were up 24% from March, but this total was less than half of the unusually heavy imports in April a year ago.

Cumulative imports for the first four months of 1961 totaled 91.3 million gallons compared with 145.8 million during the same period last year.

Exports of industrial and feed molasses from the U.S. mainland and its territories in April totaled 1 million gallons. This was down 50% from March but about 40% higher than April, 1960. Puerto Rico supplied 800,000 gallons of the exports and the remainder came from the U.S. mainland.

Hawaiian cane blackstrap production in May increased 40% over April and was 25% higher than in May last year, USDA said. Cumulative production during the first five months of 1961 is 20% above the same period a year earlier. Shipments during May were not available at the time of the report's release.

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QUOTES

(Continued from page 90)

supply sufficient for present but maritime strike could make imported fish meal unobtainable; sacked: 65% protein, Peruvian $124, June, unchanged; new crop menhaden $127.50, June, unchanged.

Los Angeles: Demand and trend steady; supply light; local production, 60% protein $1.87½@1.90 a unit, unchanged.

Boston: Demand and supply good; trend steady; 57% $110, down $2; 60% $114, down $2; both f.o.b. Gloucester.

Portland: Demand slow; trend lower; supply ample; $1.80 a protein unit, sacked.

Denver: Demand good; trend steady; supply short; $1.85 a protein unit, West Coast.

Seattle: Demand fair; trend firm; supply limited; $1.85 a unit protein, f.o.b. truck Vancouver, B.C. (Canadian production) down 5¢.

Atlanta: Demand good; trend steady; supply limited; 60% menhaden $112, sacked, f.o.b. Atlantic and Gulf ports.

Minneapolis: Demand good; supplies limited to scarce; prices up $1 on West Coast blended and 5¢ on the Canadian herring; West Coast blended $142; Canadian herring $1.75 a unit, f.o.b. West Coast, subject to production.

Buffalo: Demand fair; trend steady; supply limited; 60% protein menhaden $120, f.o.b. Buffalo, unchanged.

Chicago: Demand slow; trend easier; supply getting heavier; menhaden, East Coast or Gulf $112@115; scrap $108@111; Canadian herring meal $1.70 a unit of protein.

HOMINY FEED

Los Angeles: Demand good; trend firmer; supply adequate; hominy meal $51, up 50¢; hominy pellets $53, up 50¢.

Cincinnati: Demand fair; trend steady to lower; supply adequate; $40.50, down $1.

St. Louis: Demand fair; trend easy; supply ample; yellow $39, up $1.

Boston: Demand and supply steady; trend unsettled; $48.50, off 50¢.

Seattle: Demand good; trend steady; supply limited; $53, delivered carlots, sacked, unchanged.

Chicago: Demand and supply fair; trend steady; $39.

Kansas City: Demand good; trend steady; supply adequate; yellow hominy $35@35.50.

Buffalo: Demand fair; trend steady to lower; supply adequate; $48, Boston, off 50¢.

LINSEED OIL MEAL

Cincinnati: Demand poor; trend lower; supply adequate; new process $49.50, old process $55.50, Minneapolis, down $1.50.

Ft. Worth: Demand slow; trend steady; supply sufficient; 34% protein, extracted $65.40, June, unchanged.

San Francisco: Demand fair; supply ample; trend steady; $70.

Los Angeles: Demand and trend steady; supply adequate; local production, 31% protein $71, unchanged.

Boston: Demand spotty; trend steady; supply adequate; 32% $76.20, up $1.

Denver: Demand fair; trend steady; supply ample; $64.

Seattle: Demand fair; trend steady; none available; $55, delivered carloads, sacked, 34% protein (Montana) unchanged.

Minneapolis: Demand fair; supplies tighter to adequate; prices up $1@1.50; $50@50.50.

Chicago: Demand and supply fair; trend steady to 50¢ up; Minneapolis basis: solvent $50, expeller $55.50.

Portland: Demand dull; trend unchanged; supply adequate; 34% solvent $81.50, sacked.

Buffalo: Demand and supply fair; trend steady to higher; $50.50, f.o.b. Minneapolis, up $2.

MEAT AND BONE MEAL

Ft. Worth: Demand good; trend steady; supply moderate; meat and bone $92.50 bulk, $96 sacked, f.o.b. Ft. Worth, unchanged.

Cincinnati: Demand good; trend steady; supply short; 50% meat and bone scraps $90, Cincinnati, down $1.

San Francisco: Demand good; trend lower; supply fair; $1.75 a unit of protein, unchanged.

Memphis: Demand slow; trend easier; supply adequate; 50% protein $91, without billing, down $3; 50% protein $93.90, with rail transit, down $1.60.

Los Angeles: Demand slower; supply adequate; trend steady; 50% protein $1.80 a unit, unchanged to 5¢ lower.

St. Louis: Demand fair; trend steady; supply ample; 50% $90, down $2.50.

Boston: Demand fair; trend easier; supply ample; protein unit $1.50, off 5¢; converted 50% $89.50, off $2.50.

Denver: Demand fair; trend steady; supply scarce; $86.

Seattle: Demand fair; trend steady; supply limited; $1.85 a unit protein, ex-processing plant, sacked, down 5¢.

St. Paul: Demand fair; supplies fair; price held steady at $100@103.

Chicago: Demand quiet; trend off $2.50; supply fair; 50% protein $95, sacked.

Portland: Demand slow; trend lower; supply ample; 50% $85@87.50, sacked.

Kansas City: Demand fair; trend steady; supply ample; 50% $95, unchanged.

Buffalo: Demand quiet; trend steady; supply light; 50% meat scraps $90, f.o.b. Buffalo, unchanged.

MEXICAN PHOSPHATE

Brownsville, Texas: Mexican natural ground rock, 13% phosphorus $39 sacked, bulk $2 less; 14% $43 sacked, bulk $2 less.

MILLFEED

Minneapolis: Demand slow; supplies adequate; sacked middlings steady at $37.50; sacked bran steady at $36; sacked red dog price steady at $43.

Kansas City: Demand slow; trend weak; supply ample; sacked bran $33@33.50, unchanged; sacked shorts $38@38.50, unchanged; bulk bran $26.50@27, down $2; bulk shorts $32@32.50, down $1; bulk middlings $27.50@28, down $3@3.50.

Ft. Worth: Demand good; trend lower; offerings light for immediate; bran bulk $36.50, burlaps $41; gray shorts bulk $41, burlaps $46.50; bulk middlings $40, delivered Texas common points; bran and shorts $1.50@2 higher and middlings $3 higher.

Chicago: Demand quiet; trend off $1@2; supply good; standard bran $33, standard midds. $34.50, red dog $39.

St. Louis: Demand good; trend firm; supply adequate; sacked bran $38.25, down $2; sacked shorts $43.25, unchanged; bulk bran $34, down 50¢; bulk middlings $35, down $2.

Cincinnati: Demand fair; trend steady to higher; supply adequate; bran $35, up $1; middlings $40, down $1.

Buffalo: Demand fair; trend steady to lower; supply fair to good; bran $31, unchanged; middlings $35, off $2.50; red dog $42, off $1.50; all prices f.o.b. Buffalo.

Boston: Demand cautious; trend easier; supply ample; bran $39.60, down $2.50; middlings $44.60, down $1.50.

Memphis: Demand fair; trend steady; supply ample; wheat bran $36.80, unchanged; gray shorts $39.80, down $1; standard midds. $37.80, down $2.

Denver: Demand slow; trend easier; supply ample; shorts $41.75, bran $36.75, millrun $39.25.

Portland: Demand slow; trend lower; supply adequate; $39.50@40.50.

Seattle: Demand fair; trend steady; supply limited; $41, delivered common transit points, carlots, unchanged.

Los Angeles: Standard millrun $45.50@46.50, 50¢ higher to 50¢ lower, demand slow, trend steady, supply adequate; red bran $46@47, 50¢ lower, demand limited, trend easier, supply increased.

San Francisco: Demand good; supply fair; trend steady; millfeed $43, red bran $48.50, both unchanged.

MOLASSES

Cincinnati: Demand fair; trend steady; supply adequate; 14½¢ gal., New Orleans, unchanged.

St. Louis: Demand fair; trend steady; supply adequate; blackstrap 14¢ gal., tank cars, New Orleans.

Ft. Worth: Demand moderate; trend steady; supply sufficient; blackstrap 14½¢ gal., f.o.b. Houston; truck $31.49, delivered Ft. Worth, seller's market price on date of shipment, unchanged.

San Francisco: Demand and supply good; trend steady; $25.75, f.o.b. cars, Richmond, Cal.

Memphis: Demand fair; trend steady; supply ample; blackstrap 14½¢ gal., tank car, f.o.b. New Orleans, unchanged; $30.50 ton, delivered Memphis, truck, down 50¢.

Los Angeles: Demand good; trend easier; supply adequate; $25.50, f.o.b. tank cars, down $1; $25.75, f.o.b. tank trucks, down $1.

Boston: Demand and supply steady; trend firm; 16½¢ gal. in tank cars, unchanged.

Kansas City: Demand fair; trend steady; supply ample; 14½¢ gal., New Orleans, unchanged.

Denver: Demand and trend steady; supply ample; $34.70, tank cars.

Seattle: Demand fair; trend firm; supply good; $26.75, f.o.b. Seattle, tank truck lots, unchanged.

Atlanta: Demand good; trend stronger; supply limited; citrus $21, f.o.b. Florida processing plants.

Minneapolis: Demand fair; supplies adequate; price firm at $35 for blackstrap, tank truck, delivered; $31 for beet; $33 for blend.

Buffalo: Demand and supply good; trend steady; 16½¢ gal., f.o.b. Albany, unchanged.

OAT PRODUCTS

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats $44@50, unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; 10% protein oat millfeed $10.30, sacked, down $1; reground $20.80, sacked, 50¢ down.

St. Louis: Demand fair; trend steady; supply ample; white pulverized $42, unchanged; reground oat feed $13, unchanged.

Boston: Demand slow; trend easy; supply good; white pulverized $55, sacked, unchanged; reground oat feed $24.10, down 90¢.

Chicago: Demand and supply fair; trend steady to 50¢ off; reground oat feed $10.50, No. 1 fine ground feeding oatmeal $66.50, feeding rolled oats $70.50.

Minneapolis: Demand dull; supplies adequate; price of crimped off $1; sacked feeding rolled $79; sacked feeding oatmeal $64.50; sacked pulverized $42; sacked crimped $59; sacked oat feed $20.

Seattle: Demand and supply fair; trend steady; $56, delivered truck lots, 38 lb. or better, unchanged.

Kansas City: Demand fair; trend steady to weaker; supply adequate; oat mill by-product $13.50@14, sacked, unchanged; feeding rolled oats $72@73, sacked, unchanged.

Buffalo: Demand fair; trend steady to lower; supply fair to good; $24.25, sacked, Boston, unchanged.

PEANUT OIL MEAL

Los Angeles: Demand and trend steady; supply ample; $79, sacked, unchanged.

Atlanta: Demand fair; trend steady; supply limited; 45% solvent process $62, expeller $64, f.o.b. Alabama and Georgia producing mills.

POULTRY BY-PRODUCTS

Memphis: Demand slow; trend slow; supply adequate; 55% meal $97.50, sacked, unchanged.

Los Angeles: Demand good; trend steady; supply tight; $1.50 a unit of protein, sacked, unchanged.

Ft. Worth: Demand good; trend steady to lower; supply extremely scarce; $100@102.50, sacked, f.o.b. Texas plants, $2@2.50 lower.

Boston: Demand active; trend firm; supply light; $100, unchanged.

Atlanta: Demand good; trend steady; supply limited; meat meal $97, f.o.b. Alabama and Georgia processing plants.

RICE BY-PRODUCTS

Ft. Worth: Demand good; trend steady; supply very scarce, mills closing down for season; rice bran $35@36, f.o.b. south Texas rice mills, sacked, unchanged; hulls $2.

San Francisco: Demand good; supply ample; trend firm; bran $43, unchanged.

Los Angeles: Demand good; trend steady; supply tight; California production, high fat content, bran $50, sacked, unchanged.

Atlanta: Demand good; trend steady; supply short; bran $43, sacked, delivered.

Buffalo: Demand good; trend steady; supply tight; $51.60, Boston, unchanged.

SCREENINGS

Los Angeles: Demand slow; trend steady; supply adequate; ground barley $35, sacked, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; unground grain screenings $15, up $1@2.

Chicago: Demand slow; supply adequate; trend unchanged; ground grain $31, Canadian $26.50, sacked.

Minneapolis: Demand improved on Canadian; supplies fair; unground Canadians up 50¢ to $14.50; domestic lights steady at $1@8; domestic mediums steady at $10@18; domestic heavies steady at $18@26; 15% flax screenings steady at $36.

Buffalo: Demand and supply fair; trend steady; ground, sacked $27.75, New York, lake and rail, off 50¢; unground, bulk $23, New York, up 25¢.

SOFT PHOSPHATE

(Sacked, Delivered)

Atlanta: $20.25.
Buffalo: $25.50.
Chicago: $24.96.
Cincinnati: $23.64.
Des Moines: $28.42.
Kansas City: $25.07.
Memphis: $22.28.
Minneapolis: $26.12.
Philadelphia: $24.51.
St. Louis: $24.32.

SOYBEAN OIL MEAL

Ft. Worth: Demand good; trend steady for nearby, firm undertone for forward shipment; supply sufficient; 44% $73.10, June-July, unchanged to $1 up; $77.80, August, up $3.80; 50% $83 June-July, $84.20 August, up $3@4.

Los Angeles: Demand slow; trend unchanged; supply ample; $87.60@88.60, unchanged.

Cincinnati: Demand fair; trend irregular; supply adequate; $63.50, Decatur, unchanged.

San Francisco: Demand fair; supply ample; trend down; $89.

Memphis: Demand poor; trend weak; sup-

ply ample; prime 44% solvent $65, f.o.b. Memphis, up $1.

Seattle: Demand fair; trend firm; supply ample; $89.20, delivered carlots, up $1.

Atlanta: Demand fair; trend steady; supply good; 44% $71, delivered.

Chicago: Demand fair; trend $1@2.50 lower; supply ample; Decatur basis, 44% protein, unrestricted billing $63, E.T.L. $59; 50% protein, unrestricted billing $69.50, E.T.L. $65.50.

Minneapolis: Demand fair; supplies good; price of 44% off $1 and 50% off 50¢; 44% $62, 50% $68.

Kansas City: Demand slow; trend weak; supply ample; 44% solvent process $62@62.50, down $2.

Buffalo: Demand and supply fair; trend steady to higher; $60, Decatur, up $1.

TANKAGE

Ft. Worth: Demand good; trend steady; supply scarce; 60% digester $102.50, sacked, Ft. Worth, unchanged.

Cincinnati: Demand good; trend steady; supply fair; 60% digester $90, Cincinnati, down $1.

Kansas City: Demand poor; trend steady; supply ample; 60% digester $90, unchanged.

Chicago: Demand slow; trend off $2.50; supply fair; 60% protein $95, sacked.

St. Paul: Demand slow; supplies heavy; price declined to a level of $88@91 from $91@95.

UREA FEED COMPOUND

Belle, W. Va.: Minimum 42% nitrogen, 262% protein equivalent $100, f.o.b. bagged; $96 bulk, cars or trucks, freight equalized with nearest producing point.

Woodstock, Tenn.: Minimum 42% nitrogen, 262% protein equivalent; $95 bagged, $91 bulk, f.o.b. Woodstock, freight equalized with nearest producing point; $100 bagged, $96 bulk, delivered east of and including New Mexico, Colorado, Wyoming and Montana.

Pryor, Okla.: Minimum 42% nitrogen, 262% protein equivalent; $95 bagged, $91 bulk, f.o.b. Pryor, freight equalized with nearest producing point; $100 bagged, $96 bulk, delivered in cars or trucks to New Mexico, Colorado, Wyoming, Montana and all states to the East.

VEGETABLE & ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand good; trend lower; supply limited; 6¼¢ lb., f.o.b. north central Texas, down ½¢.

Los Angeles: Demand fair; trend easier; supply limited; 6¾¢ lb., down ½¢.

BROILER

(Continued from page 1)

poultry on a national basis is just as remote as it was two weeks ago.

One industry spokesman told this reporter that the broiler industry is suffering from over-capitalization, and he agreed that the feed industry itself was in part responsible. He cited, however, the extraordinary activities in some poultry areas. And he mentioned some instances where broiler businessmen have gone to the public to obtain financing and have made public offerings of stock to obtain capital.

It was observed that ultimate attrition will probably bring some broiler producers into serious financial distress, although many of them appear to have survived earlier shakeouts.

FARM BILL

(Continued from page 1)

week in Feedstuffs, and also a one-year wheat bill with a mandatory reduction of 10% of the national wheat acreage allotment of 55 million acres. Compliers with the program would obtain price support at $2.00 bu., and payments in cash or in kind based on the normal yields for land taken out of production. Wheat farmers would be eligible for compensation for withdrawal of additional acreage up to 30% of their base period and be paid in kind on a basis of 60% of their normal yields times the level of price support. For the first 10% reduction the wheat producer would be paid on the basis of 50% of his normal yield times the new higher level of support.

USDA strategy is to obtain both of these measures, even if Congress fails to approve the omnibus farm bill. Already it is seen that steps are being taken to pull these measures out of the omnibus bill and send them to the floor vote as individual items.

Export Changes

WASHINGTON — This week the U.S. government revised its export controls over U.S. agricultural surplus commodities as the Department of Commerce lowered its previous tight ban on shipments to Russian-dominated satellite nations.

This relaxation will now make available to Russian satellites—with the exception of Red China-dominated nations such as North Korea, North Vietnam and China itself—exports of U.S. surpluses at the subsidy price now available for all other nations, except that payment must be made in hard or convertible currencies. This would involve wheat, wheat flour and feed grains now obtaining subsidy export incentives.

In the case of wheat this might become a most significant item for the new crop contracts.

It has been learned that within the past 18 months Russia has exhibited strong interest in soft red wheat but failed to gain approval to purchase on the basis of the subsidy price. The Russian interest involved a substantial quantity of this variety of wheat, and if it were to be renewed, it would put a heavy drain on soft red wheat supplies this coming year.

But it is too early now to fix any market interest in such contracts until more is known about Russian intentions and interest in this wheat this coming year.

PIG CROP

(Continued from page 1)

over 6 months old (including sows) on farms June 1 came to 15,869,000, an increase of 1% above the 15,733,000 head on hand on the same date last year. Total commercial slaughter January through April of this year was 10% less than the corresponding period of 1960.

All hogs and pigs on farms June 1 in 10 corn belt states totaled 49,218,000 head, an increase of 7% from a year earlier. All of the states except Wisconsin showed increases over a year ago.

Corn Belt Picture

Virtually all of the expected increase in the number of sows to farrow this fall is accounted for by the Corn Belt. The east north central region shows an increase of 3% and the west north central, 5%. All other regions indicate fewer sows to farrow. These decreases range from 3% in the south central and western states to 7% in the south Atlantic states.

The intended number of sows for 1961 fall farrowings in 10 of the corn belt states is 4% larger than a year earlier. The 10 states—Ohio, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, South Dakota, Nebraska and Kansas—accounted for 75% of the 1960 U.S. pig crop.

Present intentions for the Corn Belt indicate that an increase of 4% will take place in the number of sows to farrow during June, July and August. The 2,345,000 sows expected to farrow would be 17% above the 1950-59 average. The 2,206,000 sows expected to farrow during the September-November quarter are 5% more than a year earlier and 20% above average.

Spring Crop Comparisons

Much of the increase in the 1961 spring pig crop occurred in the west north central region where the gain was 11% over 1960. The east north central region had an increase of 6%; the western states, 7%, and the south central region, 1%. The spring pig crop decreased 8% in the north Atlantic region and 5% in the south Atlantic region. In all regions, it was below the 1950-59 average.

The December-February quarter accounted for 36% of the spring farrowings compared with 37% a year earlier. By months, the percentage of the farrowings this spring compared with the spring of 1960 were as follows: 7.2% for December, 1960; compared with 7.3 in December, 1959; 11.1% in January, 1961, compared with 11.2% in January, 1960; February, 17.7% compared with 18.5; March, 24.3 and 25.2; April, 24.8 and 23.6, and May 14.9 and 14.2%.

In the 10 corn belt states the number of sows farrowed in the 1961 spring season totaled 5,429,000 head —6% more than a year earlier. Sows farrowing during December, January and February totaled 1,768,000 head, 4% more than the 1,695,000 a year earlier. The number farrowed during March, April and May totaled 3,661,000 sows, 7% more than the 3,419,000 during the same period in 1960.

Intended Sow Farrowings, Fall, 1961
and
Pigs Saved and Pigs per Litter, Spring, 1961
By States and Regions

State and division	Sows Farrowing Fall (June thru November) 1960	1961*	1961 as % of 1960†	Pigs Saved Spring (December through May) Pigs saved 1960	1961	1961 as % of 1960	Pigs per litter 1960	1961
	—1,000 head—		%	—1,000 head—		%	—Number—	
Maine	2	2	91	18	17	94	6.6	6.8
New Hampshire	1	1	100	9	9	100	6.7	6.8
Vermont	1	1	90	9	9	100	7.2	7.3
Massachusetts	11	11	100	76	66	87	6.3	6.0
Rhode Island	1	1	90	6	6	100	6.0	6.3
Connecticut	2	2	84	13	11	85	6.6	6.3
New York	11	10	91	122	96	79	7.2	7.4
New Jersey	11	11	100	71	66	93	5.9	5.5
Pennsylvania	54	50	93	433	418	97	7.1	7.2
N. Atlantic	94	89	94	757	698	92	6.86	6.86
Ohio	323	317	98	2,221	2,304	104	6.92	7.11
Indiana	548	564	103	3,830	3,918	102	7.04	7.06
Illinois	774	836	108	5,965	6,608	111	6.88	7.19
Michigan	90	91	101	606	609	100	7.13	7.43
Wisconsin	237	228	96	2,018	2,076	103	7.26	7.55
E. N. Central	1,972	2,036	103	14,640	15,515	106	7.00	7.20
Minnesota	386	390	101	3,490	3,707	106	7.21	7.37
Iowa	1,156	1,214	105	10,691	11,623	109	7.08	7.26
Missouri	454	472	104	3,045	3,367	111	6.89	7.18
North Dakota	24	28	117	407	460	113	7.14	7.19
South Dakota	117	135	115	1,588	1,960	123	7.06	7.26
Nebraska	242	257	106	2,170	2,567	118	7.00	7.21
Kansas	120	138	115	919	1,141	124	6.91	7.27
W. N. Central	2,499	2,634	105	22,310	24,825	111	7.06	7.26
N. Central	4,471	4,670	104	36,950	40,340	109	7.03	7.24
Delaware	4	5	112	25	28	112	6.3	6.5
Maryland	22	18	82	132	109	83	6.6	6.8
Virginia	70	65	93	496	483	97	6.8	6.8
West Virginia	10	8	83	70	61	87	7.0	7.4
North Carolina	124	117	94	1,106	1,094	99	7.0	7.2
South Carolina	48	46	96	378	363	96	6.2	6.6
Georgia	157	149	95	1,270	1,197	94	6.9	7.0
Florida	40	35	88	265	235	89	6.8	6.9
So. Atlantic	475	443	93	3,742	3,570	95	6.82	6.98
Kentucky	161	159	99	1,085	1,164	107	6.7	7.1
Tennessee	150	147	98	1,008	1,014	101	6.5	6.9
Alabama	97	97	100	796	794	100	6.8	6.9
Mississipipi	63	54	86	360	352	98	6.1	6.4
Arkansas	46	43	94	328	301	92	6.7	7.0
Louisiana	26	21	81	171	147	86	6.1	6.4
Oklahoma	45	48	106	308	343	111	6.7	7.0
Texas	113	108	96	731	714	98	6.9	6.8
So. Central	701	677	97	4,787	4,829	101	6.63	6.89
Montana	16	19	119	99	144	145	7.1	7.6
Idaho	16	14	87	101	106	105	7.2	7.6
Wyoming	3	3	100	22	22	100	6.9	7.0
Colorado	22	20	91	145	135	93	6.9	7.1
New Mexico	6	6	95	36	34	94	6.5	6.3
Arizona	2	3	104	18	19	106	6.9	7.5
Utah	7	6	89	43	44	102	6.7	6.8
Nevada	1	1	109	8	10	125	6.5	6.8
Washington	17	16	94	99	108	109	7.6	7.7
Oregon	19	19	100	122	131	107	7.6	7.7
California	32	31	97	262	266	102	6.1	6.5
Western	141	138	97	955	1,020	107	6.82	7.14
U. S.	5,882	6,017	102	47,191	50,456	107	6.96	7.18

*Number indicated to farrow from breeding intentions reports.
†Percentages based on unrounded numbers.

SPENCER KELLOGG

(Continued from page 1)

For the nine months ended May 27, net profit climbed to $810,773, equal to 65¢ a share, from $685,613 or 55¢ a share, in the first three quarters of the previous fiscal year. Sales for the three quarters were up to $95,955,751 from $86,299,512 in the corresponding 1960 period.

11% Volume Increase

Chairman Howard Kellogg, Jr., and President Fred W. Thomas said in a report to stockholders that an 11% increase in dollar volume reflects higher end-product prices and record unit volume in the company's feed-manufacturing business.

"A continuation of these circumstances is anticipated for the remainder of our fiscal year," they said.

Mr. Kellogg and Mr. Thomas said the soybean-processing industry is "encountering a period of excessive competition" and that soybean processors "are badly pressed to keep their losses at a minimum."

They noted that the U.S. Department of Agriculture in its May report estimated that the processing margin was minus 1¢ bu., the first minus figure since June, 1956, when it was minus 2¢.

Stockholders of Spencer Kellogg & Sons, Inc., will vote July 26 on a proposal to merge their comany with Textron, Inc.

PENNSYLVANIA

(Continued from page 1)

to the proposed measure, or its defeat.

The bill, as reported out by the public health and sanitation committee of the Pennsylvania legislature, would empower the secretary of the State Department of Health to determine what constitutes a restricted drug. If any of the medicants now being added to poultry or livestock feed were so classed by the state secretary of health, their sale would automatically have to be made under the supervision of a registered pharmacist, and upon prescription.

"We are told that if the manufacture and sale of medicated feeds are eliminated," Mr. Parke stated, "it means the end of the poultry industry in Pennsylvania. It would not bring an end to the sale of poultry and poultry products which had been produced with the use of medicated feeds, since these would be shipped into the state from other states."

Mr. Parke also called attention to a companion measure to the "restricted drug" bill which also has been reported upon favorably by the public health and sanitation committee of the legislature. The companion measure would "virtually eliminate" over-the-counter sales of "restricted drugs."

"We see no reason why a clerk in a drug store should be permitted to make a sale, and a clerk in a feed store prohibited.

"Who is to supervise the application of the drug? If the supply is restricted, what will happen to the price? Are there drug stores located conveniently to every farm?" Mr. Parke asked in his bulletin.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
April 15	1,234	512	915	972	120	787	2,250	2,583
April 22	1,209	520	989	884	167	807	2,121	2,638
April 29	1,140	508	956	970	162	862	2,156	2,665
May 6	1,206	467	788	846	143	811	2,309	2,390
May 13	1,209	473	831	895	119	905	2,228	2,330
May 20	1,198	475	745	962	109	906	1,944	2,344
May 27	1,226	452	840	896	145	923	1,868	2,291
June 3	1,242	447	840	910	80	841	1,974	2,114
June 10	1,230	398	949	894	104	863	1,981	2,152
June 17	1,230	431	876	969	127	891	1,963	2,104

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
April 15	1,489	621	4,477	504	8,902	344	4,928	3,364
April 22	1,512	518	4,496	487	8,885	268	5,091	3,321
April 29	1,389	601	4,381	527	8,927	296	5,077	3,164
May 6	1,240	550	4,535	477	8,948	292	4,940	3,169
May 13	1,271	638	4,239	467	8,723	309	4,614	3,149
May 20	1,121	592	4,068	552	8,564	267	4,528	3,068
May 27	1,143	469	4,096	464	8,312	247	4,480	3,153
June 3	1,110	533	3,979	462	8,307	244	4,518	3,132
June 10	1,097	518	4,046	466	8,307	266	4,482	3,002
June 17	1,155	577	4,075	406	8,072	269	4,445	3,008

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1961	Total 22 areas 1960
April 15	5,604	623	3,094	407	318	1,516	45,564	34,980
April 22	5,517	584	3,207	340	376	1,502	45,439	36,235
April 29	5,677	589	3,301	441	327	1,489	45,605	36,783
May 6	5,495	574	3,151	403	333	1,448	44,515	38,119
May 13	5,321	579	3,205	384	278	1,503	43,670	39,124
May 20	5,331	626	2,999	381	299	1,479	42,558	39,498
May 27	5,274	614	3,097	387	340	1,489	42,206	39,901
June 3	5,377	602	2,949	367	250	1,435	41,713	39,525
June 10	5,205	648	2,977	386	250	1,441	41,662	39,137
June 17	5,179	607	2,829	329	301	1,422	41,273	38,515

SWINE

(Continued from page 6)

fed on pasture compared to those fed inside.

Because of results in three out of four years, the general recommendation remains that pasture is of little value for market pigs fed balanced rations.

It was also noted that meat scrap, with one exception, gave better performance in comparison to soybean oil meal than has been the case in most recent experiments. It was stated that processing methods do influence the amino acid availability and hence the quality of various protein supplements. It is probable that meat scrap can be used at levels above 20-25% of a complete supplement as commonly recommended, if price relationships favor it over soybean oil meal, according to the researchers.

EFFECTS OF WINTER CLIMATE AND TYPE OF SHELTER ON GROWING-FINISHING SWINE—This study considered the rate of gain, efficiency of feed utilization and carcass quality of market pigs raised inside versus those raised outside during the winter months; design and insulation of colony houses used in the winter feeding of market pigs, and the effect of air and bedding temperatures on the performance of growing-finishing pigs.

Findings of the researchers, J. P. Bowland, F. V. MacHardy and V. E. Mendel, follow:

The increase in colony house temperature over outside ambient air temperature during the winter months was 4 to 5° greater for houses insulated with rock wool batt or straw packed to the eaves than for an uninsulated house of the same type. The air temperature in an open front shed averaged 9° lower than that in an uninsulated colony house.

Average daily temperature fluctuations were less in insulated colony houses than in an uninsulated colony house or open-front shed.

Bedding temperatures after the colony house or open front shed had been occupied for three weeks were at 65° or above for a majority of hours in the day. Bedding temperatures of this magnitude should be comfortable for pigs lying in the bedding.

The rate of gain and efficiency of feed utilization of market pigs raised in swine barns heated to an average of 66-67° were superior to those of pigs house in unheated colony houses. The difference in rate of gain and efficiency was not sufficiently marked to indicate any decided decrease in efficiency of pigs raised under outside conditions such as existed during the past relatively mild winter.

Carcass quality of pigs was not greatly different between lots.

A comparison of the effect of winter climate and type of shelter on gowing-finishing swine was made during the last two winters, which were mild. Thus, some reservations must be attached to the recommendation regarding outside winter feeding. The recommendation, the same as last year's, is: It seems possible to plan a year around feeding program using flat-topped colony houses of the closed-front type if large groups are used and the pigs are crowded somewhat in order to maintain more optimum temperatures within the house. Although feeding market pigs in an open-front shed proved very successful this past winter, it did not prove too successful the previous year and would probably not allow optimum rate of gain or feed efficiency in a cold winter.

SUPPLEMENTAL FAT IN RATIONS FOR SWINE—There was no influence on the rate of gain, but efficiency of feed utilization was improved 18% in this study of the effect of adding 15% stabilized tallow to the growing, finishing or growing-finishing period rations of market pigs, according to J. P. Bowland and M. S. Kuryvial.

The added fat depressed daily feed consumption and improved efficiency 18% or an amount approximately equal to the increase in energy content of the fat-containing ration, according to the research report.

The two men said that the pigs fed the fat-supplemented rations had slightly shorter carcasses, smaller areas of loin, lower total R.O.P. scores and inferior carcass grades when compared to pigs fed no fat, but the effect on carcass quality was less pronounced than in studies reported last year.

Cash returns over feed costs and initial value of the pigs were lowest for pigs fed 15% supplemental fat throughout the entire growing and finishing period, it was reported.

The researchers said, "As a general recommendation, it is advisable to use precaution in feeding high levels of supplemental fat to pigs. As a source of energy the fat is well utilized by pigs at a competitive cost with other sources of energy. However, results of experiments conducted during the past two years indicate that inferior carcasses are produced when 15 or 30% supplemental tallow is fed throughout the growing and finishing periods."

RESTRICTED FEED INTAKE FOR FINISHING PIGS—Dilution and restriction methods were used in this study of feed intake for finishing pigs reported by J. P. Bowland. Restriction of feed intake for the entire period of the study averaged about 22% through restriction (high energy ration) and 14% on the diluted ration.

It was found that dilution of the ration with oats and wheat bran reduced rate of gain by 0.46 lb. per day, increased feed requirements by 89 lb. per 100 lb. of liveweight gain and increased carcass quality, particularly reducing backfat thickness.

It was stated that restricted feeding at a level ranging from 4.1 lb. of feed per day for a 91 to 100 lb. pig to 5.4 lb. per day for a 151 to 200 lb. pig resulted in a reduced rate of gain, less efficient utilization of feed, slightly leaner carcasses but no improvement in carcass grades when compared to full feeding.

Dr. Bowland said, "At the moment, dilution of finishing rations by other than approximately 25 to 35% oats cannot be generally recommended as economically feasible in western Canada. Restriction of feed intake to a definite scale requires further study to reconcile conflicting results. One or the other method may be very useful under a particular management program."

TOP OF THE HOPPER

(Continued from page 2)

give more than lip service to 'the democratic process,' as you call it. Let's have the referendum first—an honestly conducted, honestly compiled, impartial survey of farmer opinion. Then, let's all be guided by it."

IT HAS BEEN POINTED out frequently of late that in grain areas in particular, there has been some trend toward more concentrated feed products to be used at the local mill level—that is, more premixes, base mixes, super concentrates, etc., as compared with conventional protein concentrates supplied by feed manufacturers.

With certain types of feed, however, financing can be quite a problem in this regard. Some local mills, one feed manufacturer commented, want to use more premixes and supply their own protein as well as carbohydrate. The rub is, he notes, that they still want help on feeder financing but don't want to pay the price on the more concentrated mixes which would justify any financing money.

INFORMAL NUTRITION get-togethers seem to be quite the thing these days. In the Twin City (Minneapolis and St. Paul) area, a nutrition seminar has been held monthly for quite a number of years. Nutritionists and other feed and allied industry men meet with University of Minnesota nutritionists to hear timely talks and to discuss some of the latest nutrition developments.

A rather similar project was announced by Ohio feed men recently, and it is reported that a number of these seminar groups are springing up. In one area, nutritionists from firms making feed in that particular area get together regularly. No other feed men or allied people attend, but college authorities may be invited to take part in the discussions.

THIS MAY BE A SIGN of the times. A feed manufacturer's publication for the firm's own dealers regularly devotes a good deal of attention to helping dealers improve their financial management. Currently, special information is being run on financial records which, it is suggested, should be kept and used by dealer-feeders. This is in recognition of the fact that many dealers, in addition to selling feed and other farm supplies, now have feeding projects of their own, beyond the size of demonstration flocks or herds. They are feeding with their own labor or on a contract basis.

GEORGIA-FLORIDA

(Continued from page 7)

ferring to the wing tags. 'Tagging and inspection in Florida adds no safeguards not already provided by federal inspection."

Say Law Is Needed

Florida officials say the law is needed to protect consumers and to see that they get high grade birds. Not only Georgia chickens but those from other states have to be wing-tagged and inspected, they say. They also contend that Florida-produced chickens likewise are inspected and tagged.

There is a fee of one-eighth of a cent per pound for the inspections and Georgia poultrymen say this fee costs them more than $300,000 a year, plus the cost of tagging. Mr. White charged that the fee money goes to the upkeep of the Florida Department of Agriculture which is financed almost exclusively by fees and levies. Other states, Mr. White said, finance their departments by legislative appropriations.

Asks USDA to Resume School Poultry Buying

ATLANTA, GA.—A request for the resumption of poultry purchases for the school lunch program by the U.S. Department of Agriculture has been made by Sen. Richard B. Russell.

He urged the department to use a sizeable portion of the $60-million appropriation the department has for poultry purchases during the coming fiscal year.

The school lunch program, so far as poultry is concerned, got underway earlier this year when approximately ½ million pounds of cut-up pieces were purchased for the first time. Unfortunately for the industry, the purchases were discontinued due to the school term coming to an end.

It was largely through the efforts of Sen. Russell that the first purchases were made.

IOWA MILL TO OPEN

REINBECK, IOWA — L. C. Bolson Co., in the feed processing business here since 1943, will open a new retail firm to be called Bolson Mills. A new building will be constructed, to house retail feed rooms and general offices.

DELMARVA DRUMSTICKS SERVED IN GEORGIA

SALISBURY, MD. — Georgia produces more broilers than the Delmarva peninsula, but Georgians got a taste of Delmarvelous broilers June 20.

The reason: The Salisbury (Md.) Junior Chamber of Commerce delegation to the national Jaycee convention in Atlanta took 6,000 drumsticks with them to serve at a Maryland Junior Chamber party June 20, according to Richard S. Wootten, president of the Salisbury Jaycees.

Georgia produces more poultry than any other state in the Union, but the three-state Delmarva peninsula runs a close second, it was pointed out.

MARKETS

(Continued from page 2)

though it had been tapering off previously. Since then, broilers moved back up to around 12¢, but demand for the feed definitely lags. On the other poultry feeds, turkey is holding up well. Starting feeds are falling off a little but this dip has been offset by broadening in call for growing feeds.

Demand for hog feeds is holding steady and apparently quite satisfactory as hog prices remain firm with Chicago top of $18 an almost daily feature. The June pig report by the USDA is encouraging from the standpoint of increased production already realized on spring pigs and potential enlargement seen for the fall crop.

Call for dairy feeds remains on an even keel generally . . . being fair in areas where pasture is good, but good in others where rainfall has been deficient.

South Central

The situation in formula feed business in this area remains practically unchanged from a week ago. Mill production time shows a wide variation among the units. Some plants held tightly to a five-day, 40 hour operation while others fell below that level, while a few were on an overtime basis. All in all, the average was about 40 hours.

Hog and pig feed sales top the list in volume of business. Some increase was noted in turkey feed deliveries as well as in chick grower. Chick starter business was described as drying up fast. Dairy and cattle feed demand was low, probably due to excellent pasture conditions.

While there remains a possibility of an increase in demand ahead of the coming harvest, industry men see little indication of it at present. Buying continues to be on a hand-to-mouth basis.

Ohio Valley

Several area brokers this week described the current over-all formula feed market as "uninteresting," in other words, dull and moving in a much narrower range than had been the case a week earlier.

However, a sufficiently stronger consumer demand for both eggs and poultry developed at midweek to move prices up a cent or more over those quoted a week earlier at area wholesale markets. In view of the approaching holidays, this improving consumer demand is expected to continue at least through the first week in July.

Favorable weather during the last week has resulted in the heading of winter wheat and barley, and if clear, hot weather continues to prevail, the harvesting of these important crops can be started almost on schedule, despite the unseasonable weather during the early spring months.

Mountain States

Mountain States feed men report that volume is holding up well and in some cases is higher than a year ago. Turkey feeding is at a high level and cattle feeding is holding steady. However, range cattle are also reported to be doing well because of good range conditions following extensive rains. Hay is also good because of the rains.

Prices are generally steady with hikes in grain prices offsetting drops in protein ingredients. Fish meal prices have leveled off.

Pacific Northwest

Formula feed sales this week throughout Oregon, Washington and Idaho continued to be marked by a fairly good movement of all poultry mash classes, but sales of cattle and dairy feeds were generally considered to be on the seasonally limited side.

Although feed-price ratios for most livestock and poultry classes continued to be unfavorable, things could be a lot worse since producer paying prices were generally unchanged for the second consecutive week for all poultry and livestock offerings.

Egg producers were cheered by firm to 2¢ a dozen higher wholesale egg prices. However the advance was not reflected at the grower's level where AA extra large eggs closed unchanged at 32 to 36½¢ a dozen, f.o.b. Portland, with AA large ones ending at 30 to 34½¢, f.o.b. Oregon Willamette Valley producing points.

No. 1 grade frying chickens were under trade pressure but managed to hold unchanged at Portland where they were quoted within a wide 14 to 20½¢ lb. range.

Northern California

Various reports from this area indicate that the formula feed business continues mostly steady, although there was a slight drop from last week. Most feed mills continue to operate an average 40 hour week.

Good pasture and the arrival of new-crop hay have restricted dairy feed sales in most sections.

It is reported that the turkey hatch is up 3% from the previous week and 20% more than the corresponding weekly hatch of a year ago. However, these statistics were not to be of assistance to the industry for long as an abnormal heat wave that hit central California last week brought heavy poultry losses to the area. It was reported that 50,000 chickens and turkeys were killed by the heat. It is estimated that losses will amount to approximately $400,000, according to agriculture officials of the University of California.

Southern California

Recent skyrocketing temperatures in California had an impact on the feed industry as ranchers and farmers delayed their regular feed deliveries up to a week. Many mills found demand equivalent to only three days operation.

Estimates here are that between 400,000 and 500,000 head of poultry died of the heat. Many of the turkeys were in the 20 to 22 lb. category and would have been marketed during the week. However, this loss of birds did not bring any strength to the local turkey market.

Poultrymen currently are predicting stronger egg markets for the summer months due to lower egg production, reduction of storage eggs and the possibility of the government increasing purchases. Local markets should be stronger very soon particularly after the heavy number of layer losses this week.

The broiler market remains soft at 12 to 13½¢ lb. f.o.b. ranch although 6 lb. roasters are selling in limited quantities at around 21¢ lb. f.o.b. ranch. Producers are fearful that the broiler market will continue depressed until fall.

Cattlemen predict a higher beef market towards the end of this summer followed by a stronger trend during the fall months.

Feed demand and production will lag for the next few weeks whenever exceedingly high temperatures plague the area causing both chickens and turkeys to decrease feed consumption. Higher grain prices again forced an increase in formula feed prices for the third week in a row.

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Magnus, Mabee & Reynard. ..
Maney Bros. Mill & Elev. Co.
Mann, W. P., Sales Co. ....
Marine & Trust Co. ....
Mayo Shell Corp. ....
Melos Mfg. ....
Merck & Co., Inc. ....
Meyer, C. W. ....
Mid-Continent Grain Co. ....
Mid-States Construction ....
Midwest Bag Co. ....
Midwest Dried Milk Co. ....
Millbrew Co. ....
Miller, Mel, & Co., Inc. ....
Miller Publishing Co., The ....
Minneapolis Sewing Mach. ..
Monsanto Chemical ....
Mooers Mfg. Co. ....
Morton Chemical Co. ....
Morton Salt Co. ....
Myers-Sherman Co. ....
Nagel, Herman, Co. ....
National Alfalfa Dehydrating & Mlg. Co. ....
National Distillers ....
National Molasses Co. ....
National Renderers Assn. ...
Nellis Feed Co. ....
New Century Co., The ....
New England By-Prod. Corp. ...
Nichols, Incorporated ....
Nootbaar, H. V., & Co. ....
Nopco Chemical Co. ....
North American Mfg. Co. ..
North American Trading & Import Co. ....
Nor-Vall, Inc. ....
Oakes Mfg. ....
Olavarria & Co. ....
Oyster Shell Corp. ....
Oyster Shell Prod. Co. ....
Pabst Brewing Co. ....
Paper, Calmenson & Co. ....
Parks, J. P., Inc. ....
Parrish & Heimbecker ....
Parrish, N. K. ....
Paxton Processing Co. ....
Pay Way Feed Mills, Inc. ...
Peavey, F. H., & Co. ....
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Pillsbury Co., The ....
Pittsburgh Plate Glass Co. ..
Pless, Joe N., Co. ....
Pope Testing Lab. ....
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Poultry By-Products Assn. ...
Power Curve Conveyor ....
Prater Pulverizer Co. ....
Productive Acres Mfg. Co. ...
Products Blending Co. ....
Professional Feeds Div. ....
Publicker Industries, Inc. ...
Quaker Oats Co. ....
Ralston Purina Co. ....
Rapids Machinery Co. ....
Red River Alfalfa Co. ....
Reilly Tar & Chem. Corp. ...
Reliance Feed Co. ....
Renneburg, Edw., & Sons Co.
Richardson Scale Co. ....
Ripco, Inc. ....
Roskamp Huller Co. ....
Ross Equipment Co. ....
Ross Mach. & Mill Supply ..
Ryde & Co. ....
St. Regis Paper Co. ....
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Schutte Pulverizer Co., Inc. ...
Scott Paper ....
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Sprout, Waldron & Co., Inc. ...
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Sutorbilt Corp. ....
Swanson, Carroll, Sales Co. ...
Sweet Mfg. ....
Taste Engineering Co. ....
Thomas Conveyor ....
Thompson-Hayward ....
Toxite Laboratories ....
Tobias Enterprises ....
Toledo Scale ....
Toxite Laboratories ....
Ultra-Life Laboratories, Inc. ...
Union Bag-Camp Paper Corp
Union Special ....
United Bags, Inc. ....
Universal Hoist Co. ....
Upjohn Co. ....
Van Dusen Harrington Co. ..
Vantress, Chas., Farms, Inc. ...
Vineland Laboratories, Inc. ..
Vineland Poultry Lab. ....
Vitren Corp. ....
Vy Lactos Laboratories, Inc. ...
W-W Grinder Corporation ..
Warren Douglas ....
Wellens & Co. ....
Wells, Ralph, & Co. ....
Wenger Mixer Mfg. ....
Wertz Feed Products ....
Western Condensing Co. ....
Western Yeast Co. ....
West Virginia Pulp & Paper Co. ....
White Shell Corp. ....
Whitmoyer Laboratories, Inc. ..
Wilhoit Laboratory ....
Wilson & Co. ....
Wilson, R. S., Co. ....
Winborn's ....
Wirthmore Feeds ....
Wyatt Mfg. ....
Young, John ....

Freeman to Dedicate USDA Lab at Ames

WASHINGTON — Orville L. Freeman, secretary of agriculture, will dedicate the U.S. Department of Agriculture's new $16½ million National Animal Disease Laboratory at Ames, Iowa, June 27, the USDA announced.

A list of animal diseases and disease organisms that will be studied first has been drawn up after consideration of disease problems that have nation-wide importance or cause serious economic losses.

The list includes: Diseases of cattle—brucellosis, foot rot, enteric diseases (virus diarrhea), infertility and vibriosis, leptospirosis, mastitis, pinkeye (infectious keratitis), respiratory diseases (shipping fever), and tuberculosis and paratuberculosis; diseases of swine—atrophic rhinitis, brucellosis, enteric diseases (transmissible gastroenteritis), hog cholera, leptospirosis, and swine erysipelas; diseases of poultry—chronic respiratory disease of poultry (airsaculitis of turkeys), fowl cholera, infectious bronchitis, Newcastle disease, and Salmonellosis; diseases of sheep—ecthyma (sore mouth) and foot rot.

"We have found CocciVac® the only effective way to control cocci."

Monroe C. Babcock

Babcock Poultry Farm, Inc.

PHONE: 4-6384 • P.O. BOX 286 • ITHACA, NEW YORK • CABLE "BABCOCK"

February 1, 1961

Dorn and Mitchell Laboratories, Inc.
Opelika, Alabama

Dear Sirs:

During the last five years coccidiosis has become a serious problem. In many flocks an outbreak of cocci triggers off other diseases. We have found CocciVac the only effective way to control cocci.

Evidently cocci is "fast on its feet" and has become much stronger since the industry started using coccidiostats. Also, different farms have different strains and types of cocci.

We started using CocciVac in August 1959 and have now grown over 300,000 started pullets on it. We plan to grow 300,000 on it this year. We grow beautiful pullets on CocciVac. They live on the customer's farm. They don't die with cocci during the growing period. They don't die with it in the laying house. Production has been very good. Losses from all types of leucosis in the growing period and the laying house with our started Babcock Bessies and Bonnies have been very low.

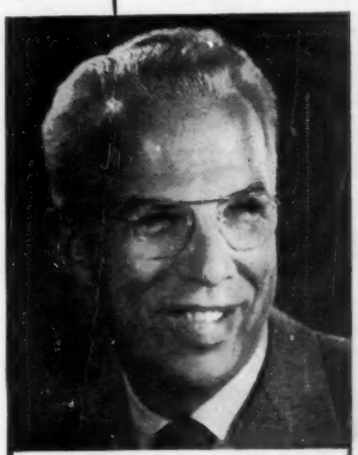
Here's our program: CocciVac in the water at four days. Trithiadol in the starting mash. Gas brooders. Keep litter damp enough to allow cocci to sporulate. In real dry houses the floors should be wet down enough to allow coccidiosis to sporulate. Our experience shows that some chicks will show "cocci signs" at three or four weeks of age but do not die. At eight weeks they are beautiful and they stay beautiful.

Sincerely yours,

Monroe C. Babcock

MCB/b

BABCOCK Chicks Make Great Layers



Mr. Babcock is one of America's leading breeders. His Babcock Bessies and Bonnies have long been noted for their profit-making abilities.

CocciVac Type 4 is available for broilers. Types A and B for layers and roasters — and for broilers in heavy exposure areas.

Dorn and Mitchell
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